

Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9722	22220	35195	0.81	1.7E-01	AJ251749.1	NT	Drosophila melanogaster mRNA for serine protease inhibitor (serpin-6), (sp6 gene)
10132	22627		2.24	1.7E-01	AL183284.2	NT	Homo sapiens chromosome 21 segment HS21C084
10283	22787	35777	0.99	1.7E-01	11427203	NT	Homo sapiens solute carrier family 7 (cationic amino acid transporter, y <sup>+</sup> system), member 2 (SLC7A2), mRNA
10285	22789	35779	1.72	1.7E-01	AA627972.1	EST_HUMAN	nc80e07.s1 NCI_CGAP_C08 Homo sapiens cDNA clone IMAGE:1148292 3' similar to gb.L25081
10560	23096	38109	9.23	1.7E-01	BE390835.1	EST_HUMAN	TRANSFORMING PROTEIN RHOC (HUMAN);
10885	23215	38227	2.63	1.7E-01	AA814617.1	EST_HUMAN	801286547F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3813258 5'
10991	23505	38538	8.7	1.7E-01	7106300	NT	cd43a03.s1 NCI_CGAP_CNS1 Homo sapiens cDNA clone IMAGE:1428924 3'
10991	23505	38537	8.7	1.7E-01	7106300	NT	Mus musculus adenomatosis polyposis coli binding protein Eb1 (Eb1), mRNA
11558	24008		2.18	1.7E-01	P15272	SWISSPROT	Mus musculus adenomatosis polyposis coli binding protein Eb1 (Eb1), mRNA
11643	24004		1.45	1.7E-01	AJ272584.1	NT	AMP NUCLEOSIDASE
11647	24079	37143	4.09	1.7E-01	11418157	NT	Bitdella aurantiaca mitochondrial partial COII gene for cytochrome c oxidase subunit II
11782	25004		1.94	1.7E-01	AL183278.2	NT	Homo sapiens calcium channel, voltage-dependent, alpha 11 subunit (CACNA11), mRNA
12333	24517		1.38	1.7E-01	N40825.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C078
12381	24548	30905	12.95	1.7E-01	U01317.1	NT	yw82c12.r1 Soares, placenta_8109weeks_2h1bHP8109W Homo sapiens cDNA clone IMAGE:258742 5'
12609	24693		1.33	1.7E-01	AJ132510.1	NT	Human beta globin region on chromosome 11
131	12788	25285	1.57	1.6E-01	AF217532.1	NT	Sus scrofa c-fos gene, exons 1-4
708	15388	25816	1.56	1.6E-01	R31497.1	EST_HUMAN	Homo sapiens mevalonate kinase gene, exon 8 and 7
1569	14161	26692	4.35	1.6E-01	AF298117.1	NT	yh75f12.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:135599 5'
1968	14552	27108	2.8	1.6E-01	P22063	SWISSPROT	Homo sapiens homodimer protein OTX2 gene, complete cds
2028	14610		1.08	1.6E-01	U10334.1	NT	AXONIN-1 PRECURSOR (AXONAL GLYCOPROTEIN TAG-1)
2427	15466	27569	0.96	1.6E-01	X84232.1	NT	Crassostrea gigas RNA polymerase II largest subunit mRNA, partial cds
2535	15099	27672	1.12	1.6E-01	AB037729.1	NT	H. sapiens mRNA for novel T-cell activation protein
2917	15534	28008	11.95	1.6E-01	AF185589.1	NT	Homo sapiens mRNA for KIAA1308 protein, partial cds
2917	15534	28007	11.95	1.6E-01	AF185589.1	NT	Homo sapiens cytochrome P450 3A4 (CYP3A4) gene, promoter region
3041	15657	28137	1.17	1.6E-01	AE001882.1	NT	Homo sapiens cytochrome P450 3A4 (CYP3A4) gene, promoter region
3695	16286	28765	1.35	1.6E-01	AJ003165.1	NT	Deinacoccus radiodurans R1 section 1 of 2 of the complete chromosome 2
3695	16286	28766	1.35	1.6E-01	AJ003165.1	NT	Populus trichocarpa cv. Trichobal ABI3 gene
3840	16439	28901	0.71	1.6E-01	AE000982.1	NT	Populus trichocarpa cv. Trichobal ABI3 gene
4072	16688		2.65	1.6E-01	AE004413.1	NT	Archaeoglobus fulgidus section 145 of 172 of the complete genome
4422	17007	29450	11.02	1.6E-01	AF179680.1	NT	Vibrio cholerae chromosome II, section 70 of 93 of the complete chromosome
4554	17137		3.42	1.6E-01	AW968601.1	EST_HUMAN	Homo sapiens apelin gene, complete cds
							EST380877 IMAGE resequences, MAGJ Homo sapiens cDNA

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4563	17146		4.68	1.6E-01	6753319	NT	Mus musculus chaperonin subunit 3 (gamma) (Cct3), mRNA
5057	17630	30074	0.84	1.6E-01	P40631	SWISSPROT	MICRONUCLEAR LINKER HISTONE POLYPROTEIN (MIC LH) [CONTAINS: LINKER HISTONE PROTEINS ALPHA, BETA, DELTA AND GAMMA]
5080	17653	30093	1.45	1.6E-01	AA088343.1	EST_HUMAN	Z84H09.s1 Stralagene colon (#937204) Homo sapiens cDNA clone IMAGE:511361 3' similar to TR:E221955
5101	17673	30112	1.26	1.6E-01	AJ006356.1	NT	E221955 38,855 BP SEGMENT OF CHROMOSOME XIV ;
5101	17673	30113	1.26	1.6E-01	AJ006356.1	NT	Lycopodium esculentum RsaI fragment 2, satellite region
5358	17918		1.81	1.6E-01	BF209302.1	EST_HUMAN	Lycopodium esculentum RsaI fragment 2, satellite region
5359	17919	30333	1.23	1.6E-01	A1874074.1	EST_HUMAN	601872523F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4096685 5'
5587	18218	30668	0.76	1.6E-01	L40608.1	NT	wm48c08.x1 NCI_CGAP_U14 Homo sapiens cDNA clone IMAGE:2439182 3'
5713	18339	30844	2.76	1.6E-01	AW197496.1	EST_HUMAN	Plasmodium falciparum (strain Dd2) variant-specific surface protein (var-1) gene, complete cds
5713	18339	30844	2.76	1.6E-01	AW197496.1	EST_HUMAN	xm43f01.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2686969 3' similar to TR:O75984 O75984
5713	18339	30845	2.76	1.6E-01	AW197496.1	EST_HUMAN	HYPOTHETICAL 127.6 KD PROTEIN ;
5725	18351	31054	2.12	1.6E-01	AF034716.1	NT	xm43f01.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2686969 3' similar to TR:O75984 O75984
6179	18789	31558	0.84	1.6E-01	BE925803.1	EST_HUMAN	HYPOTHETICAL 127.6 KD PROTEIN ;
6559	19157	31953	2	1.6E-01	AL161588.2	NT	Rattus norvegicus CCAAT/enhancer binding protein epsilon (cebpe) gene, complete cds
6559	19157	31954	2	1.6E-01	AL161588.2	NT	RC3-BN0034-310800-113-h01 BN0034 Homo sapiens cDNA
7043	18063	30453	3.49	1.6E-01	AW291215.1	EST_HUMAN	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 84
7753	20261	33157	1.44	1.6E-01	AW246359.1	EST_HUMAN	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 84
7770	20278		0.75	1.6E-01	AU136525.1	EST_HUMAN	UI-H-B12-agi-b-08-0-UI.s1 NCI_CGAP_Sub4 Homo sapiens cDNA clone IMAGE:2724418 3'
7810	20353	33282	1.43	1.6E-01	L49349.1	NT	2822248 5prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2822248 5'
7988	20510		0.55	1.6E-01	BE244087.1	EST_HUMAN	AU136525 PLACE1 Homo sapiens cDNA clone PLACE1004466 5'
8062	20604	33515	0.76	1.6E-01	U38243.1	NT	Corilla gorilla androgen receptor gene, partial exon
8567	21106	34025	0.77	1.6E-01	Z99119.1	NT	TCBAP1E0607 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP0607
8760	21299	34220	0.65	1.6E-01	R13673.1	EST_HUMAN	Bacteroides vulgatus beta-lactamase (ctxA) gene, complete cds and mobilization protein (mobA) gene, complete cds
8863	21402		0.84	1.6E-01	L36861.1	NT	Bacillus subtilis complete genome (section 16 of 21): from 2997771 to 3213410
8901	21439	34382	1.91	1.6E-01	Z49501.1	NT	yf60h08.1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:28673 5'
9039	21576		0.8	1.6E-01	AF111187.2	NT	Homo sapiens guanylate cyclase activating protein (GCAP) gene exons 1-4, complete cds
9569	22069		1.93	1.6E-01	BF375171.1	EST_HUMAN	S.cerevisiae chromosome X reading frame ORF YJR001w
9572	22072	35033	1.86	1.6E-01	Z49501.1	NT	Homo sapiens jun dimerization protein gene, partial cds; cfos gene, complete cds; and unknown gene
							RC3-ST0200-041199-011-h01 ST0200 Homo sapiens cDNA
							S.cerevisiae chromosome X reading frame ORF YJR001w



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9607	22107		1.06	1.6E-01	BE155664.1	EST_HUMAN	PM2-HT0353-270100-004-f11 HT0353 Homo sapiens cDNA
10536	23073	36087	2.7	1.6E-01	AW850853.1	EST_HUMAN	IL3-CT0220-111199-028-G01 CT0220 Homo sapiens cDNA
10880	23401	36418	1.55	1.6E-01	BE259649.1	EST_HUMAN	601145789F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3161183 5'
10894	23508		8.03	1.6E-01	AF106064.1	NT	Plasmodium falciparum calcium-dependent protein kinase-3 (cdpk3) gene, complete cds
11289	23741	36798	10.88	1.6E-01	6871552	NT	Mus musculus adaptor-related protein complex AP-1, beta 1 subunit (Aptb1), mRNA
11660	25019		1.72	1.6E-01	6879468	NT	Mus musculus protein kinase, cGMP-dependent, type II (Prkg2), mRNA
11784	24169	36776	5.34	1.6E-01	AV719585.1	EST_HUMAN	AV719585 GLC Homo sapiens cDNA clone GLOEMF07 5'
12095	24362	30968	1.55	1.6E-01	L14833.1	NT	Rat convertase PC5 mRNA, 5' end
12126	24382		1.75	1.6E-01	AW839711.1	EST_HUMAN	RC1-LT0074-120200-014-h01_1 LT0074 Homo sapiens cDNA
12228	24821		11.74	1.6E-01	AB045310.1	NT	Cucumis sativus KS mRNA for ent-kaurene synthase, complete cds
12407	24564		5.11	1.6E-01	AK024496.1	NT	Homo sapiens mRNA for FLJ00104 protein, partial cds
12487	24625		3.96	1.6E-01	AF287344.1	NT	Fuchsia hybrid cultivar Qiu 94208 ribosomal protein S10 gene, partial cds; nuclear gene for mitochondrial product
12521	24637	30898	1.88	1.6E-01	9508522	EST_HUMAN	Rattus norvegicus chondroitin sulfate proteoglycan 5 (neuroglycan C) (Cspg5), mRNA
269	12928	25412	1.76	1.5E-01	BE710087.1	EST_HUMAN	IL3-HT0619-040700-197-E05 HT0619 Homo sapiens cDNA
269	12928	25413	1.76	1.5E-01	BE710087.1	EST_HUMAN	IL3-HT0619-040700-197-E05 HT0619 Homo sapiens cDNA
613	13387		2.16	1.5E-01	AV711696.1	EST_HUMAN	AV711696 DCA Homo sapiens cDNA clone DCAADH08 5'
815	13433	25938	1.04	1.5E-01	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
1131	13734	26244	0.84	1.5E-01	AJ009735.1	NT	Cypinus carpio mRNA for EGG522 myosin heavy chain, 3'UTR
1136	13739	26248	2.28	1.5E-01	AJ251865.1	NT	Homo sapiens partial SLC22A2 gene for organic cation transporter (OCT2), exon 1
1152	13755		1.61	1.5E-01	L36125.1	NT	Rattus norvegicus insulin-responsive glucose transporter (GLUT4) gene, 5' end
1258	13855	26371	0.79	1.5E-01	AW195516.1	EST_HUMAN	xn39d11.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2696085 3'
1318	13912	26432	3.12	1.5E-01	D26535.1	NT	Human gene for dihydrolipoamide succinyltransferase, complete cds (exon 1-15)
1318	13912	26433	3.12	1.5E-01	D26535.1	NT	Human gene for dihydrolipoamide succinyltransferase, complete cds (exon 1-15)
1529	14121	26660	1.84	1.5E-01	AF117340.1	NT	Mus musculus MAP kinase kinase kinase 1 (Mekk1) mRNA, complete cds
1951	14535	27081	1.62	1.5E-01	AW444451.1	EST_HUMAN	UI-H-B13-akb-b-09-0-UI.s1 NCI_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:2733641 3'
2736	15291	27859	1.17	1.5E-01	BF695381.1	EST_HUMAN	602083269F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4247537 5'
							xw56a02.x2 NCI_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2831978 3' similar to gb:X55072_ma1
2838	15554		1.01	1.5E-01	AW572516.1	EST_HUMAN	THYROID HORMONE RECEPTOR ALPHA-1 (HUMAN);
3070	15685	28157	0.62	1.5E-01	M81441.1	NT	Bos taurus factor V variant 2 (factor V) mRNA, complete cds
3395	16003	28484	6.87	1.5E-01	AA935049.1	EST_HUMAN	cc68405.s1 NCI_CGAP_GC4 Homo sapiens cDNA clone IMAGE:1571337 3' similar to gb:M11433
3415	16023	28504	0.65	1.5E-01	Z23104.1	NT	RETINOL-BINDING PROTEIN I, CELLULAR (HUMAN);
3415	16023	28505	0.65	1.5E-01	Z23104.1	NT	L.stegnalis mRNA for G protein-coupled receptor

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3474	16080	28553	0.99	1.5E-01	AW612237.1	EST_HUMAN	h2902.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2956539 3' similar to contains element MER16 repetitive element ;
3819	18419	28881	2.13	1.5E-01	U09064.1	NT	Mus musculus [CR/Swiss glyceraldehyde 3-phosphate dehydrogenase (Gapd-S) gene, complete cds Homo sapiens pyruvate dehydrogenase kinase, isoenzyme 1 (PDK1), nuclear gene encoding mitochondrial protein, mRNA
3835	18434	28896	0.94	1.5E-01	7108358	NT	XYNA; Thermococcus bacterium; xyna; 4182 base-pairs
3849	18447	28908	0.58	1.5E-01	M97882.1	NT	h10106.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2981411 3'
3934	16532	28999	2.74	1.5E-01	AW665983.1	EST_HUMAN	Populus trichocarpa cv. Trichobal ABI3 gene
3951	16549	29017	0.9	1.5E-01	AJ003165.1	NT	Populus trichocarpa cv. Trichobal ABI3 gene
3951	16549	29018	0.9	1.5E-01	AJ003165.1	NT	Populus trichocarpa cv. Trichobal ABI3 gene
4124	18717	29173	0.82	1.5E-01	AW366659.1	EST_HUMAN	RC2-HT0148-191099-012-c09 HT0149 Homo sapiens cDNA
4262	16848	29296	9.62	1.5E-01	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
4833	17411	29864	1.29	1.5E-01	BF687695.1	EST_HUMAN	602087192F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4066223 5'
4863	15291	27859	2.03	1.5E-01	BF695381.1	EST_HUMAN	602083269F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4066223 5'
4906	17481	29938	0.92	1.5E-01	BE173796.1	EST_HUMAN	CM0-HT0585-280200-245-b10 HT0585 Homo sapiens cDNA
4906	17481	29939	0.92	1.5E-01	BE173796.1	EST_HUMAN	CM0-HT0585-280200-245-b10 HT0585 Homo sapiens cDNA
5139	17711	30141	1.59	1.5E-01	AL161580.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 60
5461	18096	30414	1.96	1.5E-01	P07996	SWISSPROT	THROMBOSPONDIN 1 PRECURSOR
5489	18123	30530	0.8	1.5E-01	AF256652.1	NT	Calman crocodilus MHC class II beta chain (hclbeta) gene, complete cds
5531	18163		5.6	1.5E-01	P15196	SWISSPROT	SEX HORMONE-BINDING GLOBULIN PRECURSOR (SHBG) (SEX STEROID-BINDING PROTEIN)
5729	18355	31059	4.68	1.5E-01	AW850754.1	EST_HUMAN	IL3-CT0219-160200-064-F10 CT0219 Homo sapiens cDNA
5767	18393	31106	6.97	1.5E-01	U65016.1	NT	Mus musculus transforming growth factor alpha (TGFA) mRNA, complete cds
5767	18393	31107	6.97	1.5E-01	U65016.1	NT	Mus musculus transforming growth factor alpha (TGFA) mRNA, complete cds
6156	18769	31532	1.4	1.5E-01	6753659	NT	Mus musculus DNA methyltransferase 2 (Dnmt2), mRNA
6156	18769	31533	1.4	1.5E-01	6753659	NT	Mus musculus DNA methyltransferase 2 (Dnmt2), mRNA
6194	18804	31573	1.96	1.5E-01	AJ276505.1	NT	Mus musculus genomic fragment, 279 Kb, chromosome 7
6342	18948	31725	3.23	1.5E-01	BE727658.1	EST_HUMAN	601564322F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3833981 5'
6394	18997		1.86	1.5E-01	4506396	NT	Homo sapiens RAD54 (S cerevisiae)-like (RAD54L) mRNA
6484	19086	31867	1.75	1.5E-01	AF134907.1	NT	Influenza B virus (B/Nanchang/480/94) NB protein gene, complete cds; and neuraminidase gene, partial cds
6626	24765	32027	1.94	1.5E-01	AE001039.1	NT	Archaeoglobus fulgidus section 68 of 172 of the complete genome
6652	19248	32050	4.63	1.5E-01	11417236	NT	Homo sapiens chromosome 5 open reading frame 3 (OSORF3), mRNA

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6663	19259	32063	1.5	1.5E-01	P48508	SWISSPROT	GLUTAMATE-CYSTEINE LIGASE REGULATORY SUBUNIT (GAMMA-GLUTAMYL-CYSTEINE SYNTHETASE) (GAMMA-ECS)(GCS LIGHT CHAIN)
6702	19297	32101	2.16	1.5E-01	Q28462	SWISSPROT	AMELOGENIN
6786	19377	32192	0.95	1.5E-01	AA714780.1	EST_HUMAN	hw30d10.s1 NCI_CGAP_GCB0 Homo sapiens cDNA clone IMAGE:1241871 3'
6813	19404	32220	1.59	1.5E-01	P30143	SWISSPROT	HYPOTHETICAL 51.7 KD PROTEIN IN THRC-TALB INTERGENIC REGION (ORF8)
7055	18074	30484	6.39	1.5E-01	AW970285.1	EST_HUMAN	EST382376 MAGE resequences, MACK Homo sapiens cDNA
7268	19786		1.9	1.5E-01	AF210842.1	NT	Homo sapiens HARP (HARP) gene, exon 17 and complete cds
7423	19947	32813	1.5	1.5E-01	A1973157.1	EST_HUMAN	wf52a08.x1 NCI_CGAP_U11 Homo sapiens cDNA clone IMAGE:2491310 3'
7589	20104	32979	1.02	1.5E-01	AF299073.1	NT	Bos taurus Niemann-Pick type C1 disease protein (NPC1) mRNA, complete cds
7589	20104	32980	1.02	1.5E-01	AF299073.1	NT	Bos taurus Niemann-Pick type C1 disease protein (NPC1) mRNA, complete cds
7596	20110	32984	1.71	1.5E-01	AW500611.1	EST_HUMAN	UI-HF-BN0-akk-d-05-Q-U1r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3077409 5'
7596	20110	32985	1.71	1.5E-01	AW500611.1	EST_HUMAN	UI-HF-BN0-akk-d-05-Q-U1r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3077409 5'
7722	20230	33119	0.71	1.5E-01	U46860.1	NT	Saccharomyces cerevisiae weak multicopy suppressor of lost-1-1 (SOL3) gene, complete cds
8002	20544	33446	1.1	1.5E-01	P21303	SWISSPROT	MEROZOITE RECEPTOR PK66 PRECURSOR (66 KD PROTECTIVE MINOR SURFACE ANTIGEN)
8161	20702	33617	0.95	1.5E-01	AA970317.1	EST_HUMAN	o085g12.s1 NCI_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1573030 3' similar to gb:M26062
8254	20785		1.11	1.5E-01	BE884799.1	EST_HUMAN	INTERLEUKIN-2 RECEPTOR BETA CHAIN PRECURSOR (HUMAN);
8339	20880		11.5	1.5E-01	C16800.1	EST_HUMAN	601510523F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3912004 5'
8372	20912	33832	1.82	1.5E-01	L27835.1	NT	C16800 Clontech human aorta polyA+ mRNA (#6572) Homo sapiens cDNA clone GEN-529H09 5'
8529	21068	33987	2.04	1.5E-01	D84476.1	NT	Pangasinanodon gigas growth hormone (GH) mRNA, complete cds
8550	21089		0.86	1.5E-01	P43446	SWISSPROT	Homo sapiens mRNA for ASK1, complete cds
8772	21311	34234	1.23	1.5E-01	4501972	NT	WNT-10A PROTEIN PRECURSOR
9033	21570	34499	2.46	1.5E-01	N74226.1	EST_HUMAN	Homo sapiens adaptor-related protein complex 1, beta 1 subunit (ADTB1), mRNA
9121	21657	34598	1.06	1.5E-01	BF585465.1	EST_HUMAN	z559e06.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:286866 3' similar to PIR:S44443 S44443 RAD23 protein homolog2 - human ;
9128	21663		2.63	1.5E-01	AV754819.1	EST_HUMAN	GVO000404 Human Psoriasis Differential Display Homo sapiens cDNA
9326	21840		0.94	1.5E-01	AU130007.1	EST_HUMAN	AV754819 TP Homo sapiens cDNA clone TPAAHB12 5'
9374	20313	33215	7.21	1.5E-01	U00455.1	NT	AU130007 NT2RP3 Homo sapiens cDNA clone NT2RP3000080 5'
9731	22229	35206	0.48	1.5E-01	M77144.1	NT	Aspenser transmontano vitellogenin mRNA, partial cds
9835	22333	35314	8.51	1.5E-01	AF007570.1	NT	Human type II 3-beta hydroxysteroid dehydrogenase/ 5-delta - 4-delta isomerase gene, complete cds
9835	22333	35315	8.51	1.5E-01	AF007570.1	NT	Aplysia californica carboxypeptidase D mRNA, complete cds
10104	22599	35591	2.54	1.5E-01	X98852.1	NT	Aplysia californica carboxypeptidase D mRNA, complete cds
10188	22883		3.34	1.5E-01	AB027759.1	NT	P.teniusculus mRNA for integrin beta subunit
							Mesocricetus auratus mRNA for collagen type XVII, complete cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10210	22705	35698	2.82	1.5E-01	AI814046.1	EST_HUMAN	wk53h12.x1 NCI_CGAP_P122 Homo sapiens cDNA clone IMAGE:2419175 3' similar to gb:M27508 BETA GALACTOSIDASE-RELATED PROTEIN PRECURSOR (HUMAN);
10210	22705	35699	2.82	1.5E-01	AI814046.1	EST_HUMAN	wk53h12.x1 NCI_CGAP_P122 Homo sapiens cDNA clone IMAGE:2419175 3' similar to gb:M27508 BETA GALACTOSIDASE-RELATED PROTEIN PRECURSOR (HUMAN);
10288	22783	35775	1.75	1.5E-01	U40932.1	NT	Danio rerio transcription factor Pax8b (Pax8) mRNA, complete cds
10433	22927	35933	1.97	1.5E-01	AJ011984.1	NT	Claviceps purpurea ps1 gene
10433	22927	35934	1.97	1.5E-01	AJ011984.1	NT	Claviceps purpurea ps1 gene
10704	23233	36245	5.45	1.5E-01	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
10704	23233	36246	5.45	1.5E-01	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
10954	23469	36494	1.71	1.5E-01	AW841915.1	EST_HUMAN	IL5-CN0024-030300-026-D04 CN0024 Homo sapiens cDNA
11045	19947	32813	2.44	1.5E-01	AI973157.1	EST_HUMAN	wr52c08.x1 NCI_CGAP_U11 Homo sapiens cDNA clone IMAGE:2491310 3'
11739	24875		79.5	1.5E-01	BF700582.1	EST_HUMAN	602128753F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4285549 5'
12125	24381		1.43	1.5E-01	AF030358.2	NT	Rattus norvegicus chemokine CX3C mRNA, complete cds
12190	24899		7.05	1.5E-01	R83077.1	EST_HUMAN	yp87e04.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:184430 5'
12288	24920		3.12	1.5E-01	AV741272.1	EST_HUMAN	AV741272 CB Homo sapiens cDNA clone CBDA0404 5'
12406	24824	30794	16.12	1.5E-01	AL139074.2	NT	Campylobacter jejuni NCTC11168 complete genome; segment 1/6
12621	24699	30862	3	1.5E-01	Q92078	SWISSPROT	VOLTAGE-DEPENDENT T-TYPE CALCIUM CHANNEL ALPHA-1I SUBUNIT (CAVT.3)
12632	24709	30865	11.33	1.5E-01	AJ276242.1	NT	Sus scrofa mRNA for sodium iodide symporter
321	12975		1.48	1.4E-01	AF009863.1	NT	Homo sapiens T cell receptor beta locus, TORBV85P to TORBV21S2A2 region
943	13556		2.71	1.4E-01	D78638.1	NT	Xenopus laevis mRNA for DNA (cytosine-5-)methyltransferase, complete cds
1302	13896		1.59	1.4E-01	T91884.1	EST_HUMAN	y454c01.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:112032 3'
1784	14374		1.35	1.4E-01	6679980	NT	Mus musculus growth differentiation factor 5 (Gdf5), mRNA
1787	14377	26921	1.39	1.4E-01	AE001710.1	NT	Thermotoga maritima section 22 of 136 of the complete genome
2029	14611		10.08	1.4E-01	AA720615.1	EST_HUMAN	m72407.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1283821 3'
2514	15078	27650	1.4	1.4E-01	P30706	SWISSPROT	GLYCEROL-3-PHOSPHATE ACYLTRANSFERASE PRECURSOR (GPAT)
2818	15370	27940	4.1	1.4E-01	AJ93496.1	EST_HUMAN	wm74d01.x1 NCI_CGAP_U12 Homo sapiens cDNA clone IMAGE:2441665 3'
4253	16841	29290	10.32	1.4E-01	AI699094.1	EST_HUMAN	b56c02.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2273570 3'
4253	16841	29291	10.32	1.4E-01	AI699094.1	EST_HUMAN	b56c02.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2273570 3'
4321	16907	29349	3.71	1.4E-01	AE001710.1	NT	Thermotoga maritima section 22 of 136 of the complete genome
4501	17085		0.61	1.4E-01	AA776287.1	EST_HUMAN	z50b01.s1 Soares fetal liver spleen 1NFLS_S1 Homo sapiens cDNA clone IMAGE:453673 3' similar to gb:X01057_ma1 INTERLEUKIN-2 RECEPTOR ALPHA CHAIN PRECURSOR (HUMAN); contains Alu repetitive element;
4784	17364	29815	0.59	1.4E-01	5453861	NT	Homo sapiens phosphodiesterase 4A, cAMP-specific (dunce (Drosophila)-homolog phosphodiesterase E2) (PDE4A), mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5329	17890		1.74	1.4E-01	BE910013.1	EST_HUMAN	601498056F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3900157 5'
5503	18142	30554	4.49	1.4E-01	T90677.1	EST_HUMAN	ye15c11.s1 Stralagene lung (#937210) Homo sapiens cDNA clone IMAGE:117812 3'
5532	18164	30577	4.24	1.4E-01	AB004556.1	NT	Candida tropicalis DNA for mitochondrial NADP-linked isocitrate dehydrogenase, complete cds
5532	18164	30578	4.24	1.4E-01	AB004556.1	NT	Candida tropicalis DNA for mitochondrial NADP-linked isocitrate dehydrogenase, complete cds
6440	19042	31830	2.7	1.4E-01	BE326891.1	EST_HUMAN	hr87c02.x1 NCI_CGAP_K1d11 Homo sapiens cDNA clone IMAGE:3133538 3'
6608	19205	32012	6.4	1.4E-01	AU117147.1	EST_HUMAN	AU117147 HEMBA1 Homo sapiens cDNA clone HEMBA1000769 5'
6608	19205	32013	6.4	1.4E-01	AU117147.1	EST_HUMAN	AU117147 HEMBA1 Homo sapiens cDNA clone HEMBA1000769 5'
6686	19282	32085	3.78	1.4E-01	AW082796.1	EST_HUMAN	xb71d12.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2581751 3'
6699	19295		1.53	1.4E-01	BE266536.1	EST_HUMAN	601193323F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3537581 5'
6718	19312	32115	2.07	1.4E-01	BF378533.1	EST_HUMAN	QV1-UM0036-080300-103-409 UM0038 Homo sapiens cDNA
7180	19712		0.81	1.4E-01	AL118568.1	EST_HUMAN	DKFZp781A0910.1 r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp781A0910 5'
7419	19943		1.83	1.4E-01	AW015373.1	EST_HUMAN	U1-H-B10-aat-c-09-0-UI.s1 NCI_CGAP_Sub1 Homo sapiens cDNA clone IMAGE:2710289 3'
7617	20130	33005	1.94	1.4E-01	U85845.1	NT	Oryctolagus cuniculus fructose 1,6-bisphosphate aldolase (AldB) gene, complete cds
7733	20241	33132	1.77	1.4E-01	A1305192.1	EST_HUMAN	ql80b12.x1 Soares_NiHMPu_S1 Homo sapiens cDNA clone IMAGE:1879583 3'
8410	20850		1.28	1.4E-01	AV659047.1	EST_HUMAN	AV659047 GLC Homo sapiens cDNA clone GLCFSH08 3'
8719	21258		0.62	1.4E-01	A1436093.1	EST_HUMAN	h92b12.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2126111 3' similar to TR:O02710 O02710 GAG POLYPEPTIDE.
8844	21383	34308	4.58	1.4E-01	AA307073.1	EST_HUMAN	EST178182 Colon carcinoma (HCC) cell line Homo sapiens cDNA 5' end
8924	21482	34379	0.62	1.4E-01	AW023636.1	EST_HUMAN	df58b03.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2487485 5'
9050	21587	34518	1.21	1.4E-01	R62746.1	EST_HUMAN	y10h05.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:138873 5'
9050	21587	34519	1.21	1.4E-01	R62746.1	EST_HUMAN	y10h05.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:138873 5'
9114	21650	34591	8.46	1.4E-01	BF310959.1	EST_HUMAN	601895485F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4124824 5'
9199	21716	34860	1.09	1.4E-01	W83411.1	EST_HUMAN	zd94a04.r1 Soares_fetal_NBHH19W Homo sapiens cDNA clone IMAGE:357102 5' similar to contains element KER repetitive element;
9280	21806	34757	1.47	1.4E-01	Y10196.1	NT	Homo sapiens PHEX gene
9280	21806	34758	1.47	1.4E-01	Y10196.1	NT	Homo sapiens PHEX gene
9371	20310	33213	1.95	1.4E-01	AF121361.1	NT	Drosophila melanogaster signal transducing adaptor protein (STAM), serine threonine kinase 1a1 (IAL), and zinc finger protein (DNZ1) genes, complete cds
9898	22395	35371	1.18	1.4E-01	AF023813.1	NT	Macromitrium levalium small ribosomal protein 4 (rps4) gene, chloroplast gene encoding chloroplast protein, partial cds
10000	22495	35484	0.51	1.4E-01	AW021908.1	EST_HUMAN	df28h08.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2485094 5'
10000	22495	35485	0.51	1.4E-01	AW021908.1	EST_HUMAN	df28h08.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2485094 5'
10157	22852	35845	0.72	1.4E-01	BF375285.1	EST_HUMAN	MR3-ST0218-211299-013-a08 ST0218 Homo sapiens cDNA
10157	22852	35846	0.72	1.4E-01	BF375285.1	EST_HUMAN	MR3-ST0218-211299-013-a08 ST0218 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10360	22854		0.73	1.4E-01	T84293.1	EST_HUMAN	yd47d03.r1 Soares fetal liver spleen 1N1LS Homo sapiens cDNA clone IMAGE:111365 5'
10489	22983	35991	0.7	1.4E-01	Z99117.1	NT	Bacillus subtilis complete genome (section 14 of 21): from 2599451 to 2812870
10587	23122		1.89	1.4E-01	AA811480.1	EST_HUMAN	oa99a03.s1 NCI CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1320364 3'
10722	23250	36285	3.2	1.4E-01	R53400.1	EST_HUMAN	y70c05.r1 Soares breast 2NBHst Homo sapiens cDNA clone IMAGE:154088 5'
10974	23489	36519	1.56	1.4E-01	P08648	SWISSPROT	INTEGRIN ALPHA-5 PRECURSOR (FIBRONECTIN RECEPTOR ALPHA SUBUNIT) (INTEGRIN ALPHA-F) (VLA-5) (CD49E)
11172	23679	36724	1.82	1.4E-01	X68092.1	NT	C.perfringens ORF for putative membrane transport protein
11210	19943		1.96	1.4E-01	AW015373.1	EST_HUMAN	UI-H-B10-aat-c-09-0-UI.s1 NCI CGAP_Sub1 Homo sapiens cDNA clone IMAGE:2710289 3'
11344	23042	36052	2.4	1.4E-01	U29760.1	NT	Borrelia burgdorferi glyceraldehyde-3-phosphate dehydrogenase (GAPDH), phosphoglycerate kinase (PGK), triosephosphate isomerase (TPI) genes, complete cds
12061	24344	30963	4.44	1.4E-01	X74773.1	NT	P.salina plastid gene secY
12074	24352		3.65	1.4E-01	11968117	NT	Rattus norvegicus desmin (Des), mRNA
12123	25082		1.52	1.4E-01	BE513802.1	EST_HUMAN	601315638F1 NH_MGC_8 Homo sapiens cDNA clone IMAGE:3634328 5'
12223	24444		9.33	1.4E-01	AF083221.1	NT	Fugu rubripes putative neurotransmitter receptors, YDR140w homolog, and glycineamide ribonucleotide transferase (GART) genes, complete cds
12235	24451		1.96	1.4E-01	D64004.1	NT	Synechocystis sp. PCC6803 complete genome, 23/27, 2868767-3002965
12315	25098		1.77	1.4E-01	P10447	SWISSPROT	TYROSINE-PROTEIN KINASE TRANSFORMING PROTEIN ABL
12340	24522		2.01	1.4E-01	AA452305.1	EST_HUMAN	Zc30e12.r1 Soares total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:788014 5' similar to contains
12545	24900		3.55	1.4E-01	D82983.1	NT	Alu repetitive element
12627	24705		1.33	1.4E-01	AW377998.1	EST_HUMAN	Mus musculus mRNA for prolidase, complete cds
344	12996	25481	2.28	1.3E-01	4758467	NT	MR0-H70208-221299-204-c08 HT0208 Homo sapiens cDNA
344	12996	25482	2.28	1.3E-01	4758467	NT	Homo sapiens G protein-coupled receptor 50 (GPR50) mRNA
555	13186	25664	3.25	1.3E-01	AB011319.1	NT	Homo sapiens G protein-coupled receptor 50 (GPR50) mRNA
664	13288	25769	3.03	1.3E-01	AJ277606.1	NT	Homo sapiens gene for NBS1, complete cds
664	13288	25770	3.03	1.3E-01	AJ277606.1	NT	Human calicivirus HUNLV/Girlington/93UK RNA for capsid protein (ORF2), strain HUNLV/Girlington/93/UK
877	13481	26009	0.78	1.3E-01	X53330.1	NT	Human calicivirus HUNLV/Girlington/93UK RNA for capsid protein (ORF2), strain HUNLV/Girlington/93/UK
927	13540	26058	1.44	1.3E-01	AF139518.1	NT	P.dumerilii histone gene cluster for core histones H2A, H2B, H3 and H4
1064	13659	26179	1.36	1.3E-01	AL117078.1	NT	Rattus norvegicus A-kinase anchor protein mRNA, complete cds
1166	13768		2.03	1.3E-01	AL115265.1	NT	Botrytis cinerea strain T4 cDNA library under conditions of nitrogen deprivation
1257	13854	26370	1.36	1.3E-01	AV712467.1	EST_HUMAN	Botrytis cinerea strain T4 cDNA library under conditions of nitrogen deprivation
1493	14085		0.97	1.3E-01	AF146277.1	NT	AV712467 DCA Homo sapiens cDNA clone DCAAF05 5'
						NT	Homo sapiens adapter protein CMS mRNA, complete cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2002	14584	27143	2.32	1.3E-01	AL117078.1	NT	Botrytis cinerea strain T4 cDNA library under conditions of nitrogen deprivation
2215	14790		1.21	1.3E-01	AJ243578.1	NT	Rhodospseudomonas acidophila pucB5, pucA5, pucB6, pucA7, pucB8, pucA8 and pucC genes and ORF151
2329	14900		1.58	1.3E-01	AW812104.1	EST_HUMAN	RC4-ST0173-191089-032-412 ST0173 Homo sapiens cDNA
2421	14989		3.74	1.3E-01	AE001016.1	NT	Archaeoglobus fulgidus section 81 of 172 of the complete genome
2622	15184	27750	1.55	1.3E-01	M86918.1	NT	Cerastium auratus keratin type I mRNA, complete cds
3402	16011	28490	0.81	1.3E-01	AF196779.1	NT	Homo sapiens transcription factor IGEM enhancer 3, JM11 protein, JM4 protein, JM5 protein, T54 protein, JM10 protein, A4 differentiation-dependent protein, triple LIM domain protein 6, and synaptophysin genes, complete cds; and L-type calcium channel $\alpha$ -
3498	16103	28578	0.99	1.3E-01	M21572.1	NT	Bovine branched chain alpha-keto acid dihydrolipoyl transacylase mRNA, complete cds
3785	16385	28850	1.19	1.3E-01	AP000001.1	NT	Pyrococcus horikoshii OT3 genomic DNA, 1-287000 nt. position (177)
3785	16385	28851	1.19	1.3E-01	AP000001.1	NT	Pyrococcus horikoshii OT3 genomic DNA, 1-287000 nt. position (177)
3781	16391	28858	0.8	1.3E-01	AB032159.1	NT	Homo sapiens DD4 gene for dihydrolipoyl dehydrogenase 4 [AKR 1C4], exon 2
3848	16385	28850	0.82	1.3E-01	AP000001.1	NT	Pyrococcus horikoshii OT3 genomic DNA, 1-287000 nt. position (177)
3848	16385	28851	0.82	1.3E-01	AP000001.1	NT	Pyrococcus horikoshii OT3 genomic DNA, 1-287000 nt. position (177)
3875	16473	28937	0.74	1.3E-01	6978840	NT	Rattus norvegicus Fibrinogen, gamma polypeptide (Fgg), mRNA
4060	16657		1.3	1.3E-01	AL161581.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 77
4125	13288	25769	1.65	1.3E-01	AJ277608.1	NT	Human calicivirus HUNLV/Girlington/93/UK RNA for capsid protein (ORF2), strain HUNLV/Girlington/93/UK
4125	13288	25770	1.65	1.3E-01	AJ277608.1	NT	Human calicivirus HUNLV/Girlington/93/UK RNA for capsid protein (ORF2), strain HUNLV/Girlington/93/UK
4218	16803		0.95	1.3E-01	AF020713.1	NT	Bacteriophage SPBc2 complete genome
4238	16826		4.04	1.3E-01	AW364341.1	EST_HUMAN	QV3-DT0018-081289-038-a03 DT0018 Homo sapiens cDNA
4246	16834	29285	2.25	1.3E-01	AF026805.1	NT	Schistosoma mansoni fructose biphosphate aldolase mRNA, complete cds
4265	16851	29299	2.17	1.3E-01	AW273741.1	EST_HUMAN	ix23f10.x1 Soares_NFL_T_GBC ST Homo sapiens cDNA clone IMAGE:2813895 3'
4404	16989		1.55	1.3E-01	AL183280.2	NT	Homo sapiens chromosome 21 segment HS21C080
4577	17160	29603	0.82	1.3E-01	M21572.1	NT	Bovine branched chain alpha-keto acid dihydrolipoyl transacylase mRNA, complete cds
4631	17214	29665	2.35	1.3E-01	BE272339.1	EST_HUMAN	601126086F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:2990063 5'
4698	18009		0.84	1.3E-01	BE884017.1	EST_HUMAN	601510347F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3911987 5'
5056	17629	30073	1.05	1.3E-01	D78842.1	EST_HUMAN	HUM520C02B Human placenta polyA+ (TFujwara) Homo sapiens cDNA clone GEN-520C02 5'
5279	17841	30268	4.06	1.3E-01	AK432531.1	EST_HUMAN	th38c10.x1 NCL_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2120562 3'
5396	17954	30365	0.65	1.3E-01	AP000005.1	NT	Pyrococcus horikoshii OT3 genomic DNA, 894001-1166000 nt. position (517)

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5444	17999	30402	13.66	1.3E-01	AA991841.1	EST_HUMAN	α45e07.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1619748 3' similar to SW:YEY6_YEAST P40093 HYPOTHETICAL 38.2 KD PROTEIN IN BEM2-NCB1 INTERGENIC REGION. [1];
5444	17999	30403	13.66	1.3E-01	AA991841.1	EST_HUMAN	α45e07.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1619748 3' similar to SW:YEY6_YEAST P40093 HYPOTHETICAL 38.2 KD PROTEIN IN BEM2-NCB1 INTERGENIC REGION. [1];
5528	18160	30575	0.69	1.3E-01	AW466988.1	EST_HUMAN	h607b06.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2872979 3' similar to contains L1 b1 L1 L1 repetitive element;
5565	18196	30642	2.76	1.3E-01	AW804417.1	EST_HUMAN	QV0-UM0093-100400-189-a06 UM0093 Homo sapiens cDNA
5692	18318		0.78	1.3E-01	AF107793.1	NT	Emmericella nidulans DNA-dependent RNA polymerase II RPB140 (RPB2) gene, partial cds
5772	18397		0.78	1.3E-01	AF056880.1	NT	Hepatitis C virus 68_C110 genome polyprotein gene, partial cds
5899	18521	31246	0.89	1.3E-01	BF210920.1	EST_HUMAN	601874591F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4101119 5'
6609	19206	32014	15.81	1.3E-01	AB031326.1	NT	Schizosaccharomyces pombe gene for Alp41, complete cds
6684	19280	32083	2.07	1.3E-01	X65891.1	NT	C. jacchus intron 4 of visual pigment gene (red allele)
6883	19618		0.82	1.3E-01	W26367.1	EST_HUMAN	2673 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
7305	19833		1.94	1.3E-01	H48664.1	EST_HUMAN	Y33402.1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:207075 5'
7900	20442		0.67	1.3E-01	BE272339.1	EST_HUMAN	601126096F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:2980063 5'
7914	20456	33362	1.62	1.3E-01	11423294	NT	Homo sapiens PRO0611 protein (PRO0611), mRNA
7945	20487	33397	0.99	1.3E-01	BF690522.1	EST_HUMAN	602187015T1 NIH_MGC_49 Homo sapiens cDNA clone IMAGE:4289074 3'
8180	20721		0.47	1.3E-01	BE562528.1	EST_HUMAN	601335829F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3688934 5'
8266	20827		4.61	1.3E-01	Z74102.1	NT	S.cerevisiae chromosome IV reading frame ORF YDL054c
8325	20866		3.78	1.3E-01	8923919	NT	Homo sapiens core histone macroH2A2.2 (MACROH2A2), mRNA
8485	21005	33923	1.05	1.3E-01	BF690522.1	EST_HUMAN	602187015T1 NIH_MGC_49 Homo sapiens cDNA clone IMAGE:4289074 3'
8878	21416	34339	0.52	1.3E-01	R11172.1	EST_HUMAN	Y33911.1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:129284 5' similar to SP:RL2B_RAT P29316 60S RIBOSOMAL PROTEIN ;
8878	21416	34340	0.52	1.3E-01	R11172.1	EST_HUMAN	Y33911.1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:129284 5' similar to SP:RL2B_RAT P29316 60S RIBOSOMAL PROTEIN ;
9146	21681	34625	1.64	1.3E-01	11068003	NT	Plutella xylostella granulovirus, complete genome
9146	21681	34626	1.64	1.3E-01	11068003	NT	Plutella xylostella granulovirus, complete genome
9393	21816	34766	5.08	1.3E-01	AF023129.1	NT	Oryctolagus cuniculus H+K+-ATPase alpha 2c subunit mRNA, complete cds
9696	22185		0.8	1.3E-01	N86348.1	EST_HUMAN	J7837F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone J7837 5' similar to B-CELL RECEPTOR ASSOCIATED PROTEIN (BAP) 29
9984	22459		0.8	1.3E-01	8393940	NT	Rattus norvegicus peptidyl arginine deiminase, type IV (Pd4), mRNA
10036	22531	35526	0.83	1.3E-01	AW851599.1	EST_HUMAN	MR2-CT0222-201099-001-e01 CT0222 Homo sapiens cDNA



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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10282	24787	35776	0.9	1.3E-01	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
10417	22911	35911	0.82	1.3E-01	AU121237.1	EST_HUMAN	AU121237 HEMBB1 Homo sapiens cDNA clone HEMBB1002387 5'
10511	23049		3.33	1.3E-01	BF330999.1	EST_HUMAN	MR4-BT0358-130700-010-h08 BT0358 Homo sapiens cDNA
10975	23490	36520	1.58	1.3E-01	AF119117.1	NT	Homo sapiens dopamine transporter (SLC6A3) gene, complete cds
11130	23638		5.15	1.3E-01	6871745	NT	Mus musculus cofilin 2, muscle (Cif2), mRNA
11468	23918	36984	3.61	1.3E-01	BE279449.1	EST_HUMAN	601158052F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3504804 5'
11902	24241	31007	1.84	1.3E-01	BE618346.1	EST_HUMAN	601462741F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3866003 5'
12048	24332		3.27	1.3E-01	AJ242790.1	NT	Gallus gallus sox1 gene for lympholactin, exons 1-3
12468	24594		1.53	1.3E-01	AW001114.1	EST_HUMAN	wu24409.x1 Soares_Dieckgraebe_colon_NHCD Homo sapiens cDNA clone IMAGE:2520977 3' similar to TR:O60287 O60287 KIA0539 PROTEIN.;
12647	24721		1.84	1.3E-01	BE958903.1	EST_HUMAN	601644822R2 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:3928980 3'
408	13081	25573	10.81	1.2E-01	AI421744.1	EST_HUMAN	IF39B02.x1 NCI_CGAP_Bln23 Homo sapiens cDNA clone IMAGE:2098539 3' similar to gb:U05760_rna1
449	12678		1.43	1.2E-01	U68912.1	NT	ANNEXIN V (HUMAN); Dictyostellum discoidium ORF DG1016 gene, partial cds
573	13203		2.56	1.2E-01	AF039442.1	NT	Homo sapiens colon cancer antigen NY-CO-45 mRNA, partial cds
1418	14012	26541	2.31	1.2E-01	AU149146.1	EST_HUMAN	AU149146 NT2RM4 Homo sapiens cDNA clone NT2RM4001691 3'
1419	14012	26542	2.31	1.2E-01	AU149146.1	EST_HUMAN	AU149146 NT2RM4 Homo sapiens cDNA clone NT2RM4001691 3'
1426	14019		3.26	1.2E-01	AV735249.1	EST_HUMAN	AV735249 cda Homo sapiens cDNA clone cdaAAB11 5'
1431	14023		6.69	1.2E-01	AL445086.1	NT	Thermoplasma acidophilum complete genome, segment 4/5
1554	14146		1.19	1.2E-01	AA897474.1	EST_HUMAN	al48609.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1460584 3' similar to TR:Q16871
1673	14265	26799	1.48	1.2E-01	Q14834	SWISSPROT	Q16871 ANTI-MULLERIAN HORMONE TYPE II RECEPTOR PRECURSOR.;
1691	14283	26819	2.77	1.2E-01	AI285402.1	EST_HUMAN	NFAT3 (NF-ATC4) (NF-AT3)
1805	14395		21.02	1.2E-01	X89211.1	NT	qf69f09.x1 NCI_CGAP_Esc02 Homo sapiens cDNA clone IMAGE:1960553 3'
1964	14548		2.23	1.2E-01	AW449368.1	EST_HUMAN	H. sapiens DNA for endogenous retroviral like element
2228	14801	27373	1.31	1.2E-01	BF248490.1	EST_HUMAN	UI-H-BI3-ald-e-10-0-UI.s1 NCI_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:2734564 3'
2325	14896	27470	1.08	1.2E-01	AL163213.2	NT	601821567F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:4046224 5'
2416	14984		1.05	1.2E-01	Z21405.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C013
2625	15187	27754	1.38	1.2E-01	AW998556.1	EST_HUMAN	HSAAEBZT TEST1, Human adult Testis tissue Homo sapiens cDNA
							QV3-BN0046-220300-128-110 BN0046 Homo sapiens cDNA
							ts18g07.x1 NCI_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2228988 3' similar to TR:Q14048 Q14048
2754	15309	27875	1.11	1.2E-01	AI623388.1	EST_HUMAN	COLLAGEN VI ALPHA-2 ALTERNATIVE C-TERMINAL DOMAIN: [1]; contains element PTR5 repetitive element;
2868	15486	27959	1.22	1.2E-01	U18018.1	NT	Human E1A enhancer binding protein (E1A-F) mRNA, partial cds

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2927	15543	28019	2.37	1.2E-01	AI720470.1	EST_HUMAN	as80cd09.x1 Barstead cdon HPLRB7 Homo sapiens cDNA clone IMAGE:2335024 3' similar to gb:L05095
2961	15577	28056	3.28	1.2E-01	M16384.1	NT	60S RIBOSOMAL PROTEIN L30 (HUMAN).
3037	15653	28132	0.83	1.2E-01	X56882.1	NT	Human creatine kinase-B mRNA, complete cds
3267	15879	28362	2.08	1.2E-01	AW370688.1	EST_HUMAN	Wheat mRNA for a group 3 late embryogenesis abundant protein (LEA)
3296	15907		1.19	1.2E-01	U67600.1	NT	QV1-BT0259-261099-021-405 BT0259 Homo sapiens cDNA
3525	16130		0.62	1.2E-01	Z99118.1	NT	Methanococcus jannaschii section 142 of 150 of the complete genome
3573	16177	28659	0.82	1.2E-01	X56882.1	NT	Bacillus subtilis complete genome (section 15 of 21); from 2795131 to 3013540
3573	16177	28660	0.82	1.2E-01	X56882.1	NT	Wheat mRNA for a group 3 late embryogenesis abundant protein (LEA)
3666	16130		1.09	1.2E-01	Z99118.1	NT	Wheat mRNA for a group 3 late embryogenesis abundant protein (LEA)
3833	16432		0.64	1.2E-01	BF128551.1	EST_HUMAN	Bacillus subtilis complete genome (section 15 of 21); from 2795131 to 3013540
4261	16847	29294	1.98	1.2E-01	Z54255.1	NT	601810788R1 NIH_MGC_46 Homo sapiens cDNA clone IMAGE:4053668 3'
4261	16847	29295	1.98	1.2E-01	Z54255.1	NT	P. clarkii mRNA; repeat region (ID 2MRT7)
4402	16987	29431	0.6	1.2E-01	M15861.1	NT	P. clarkii mRNA; repeat region (ID 2MRT7)
4830	17408	29862	0.98	1.2E-01	Z48183.1	NT	Chicken neural cell-adhesion molecule (N-CAM) gene, exon 19
4909	17484		2.93	1.2E-01	AF221633.1	NT	L. esculentum mRNA for glycylase-I
5163	17732	30159	1.06	1.2E-01	BF577357.1	EST_HUMAN	Rana ridibunda pituitary adenylate cyclase-activating polypeptide variant 2 precursor, mRNA, complete cds, alternatively spliced
5275	17836	30262	10.23	1.2E-01	AL163227.2	NT	602135185F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4290165 5'
5275	17836	30263	10.23	1.2E-01	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
5423	17980		1.99	1.2E-01	AL162757.2	NT	Homo sapiens chromosome 21 segment HS21C027
5457	18092	30408	0.71	1.2E-01	AA744369.1	EST_HUMAN	Neisseria meningitidis serogroup A strain Z2491 complete genome; segment 6/7
5503	18137	30547	1.13	1.2E-01	AF223391.1	NT	ny63c04.st NCI CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1282950 3'
5513	18146	30557	2.28	1.2E-01	W33035.1	EST_HUMAN	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
5571	18202	30652	2.3	1.2E-01	Z98266.1	NT	zc08d02.r1 Soares parathyroid tumor NbhPA Homo sapiens cDNA clone IMAGE:321699 5'
5696	18322	30822	0.89	1.2E-01	Z48234.1	NT	Homo sapiens gene encoding plakophilin (exons 1-13)
6347	18952	31731	1.81	1.2E-01	BE620945.1	EST_HUMAN	M. domestica Borkh. Granny Smith adh mRNA for alcohol dehydrogenase
6395	18998	31777	0.81	1.2E-01	P10842	SWISSPROT	601463518F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3895613 5'
6441	19043	31831	2.38	1.2E-01	AW845275.1	EST_HUMAN	MATING-TYPE P-SPECIFIC POLYPEPTIDE PI
6502	19102	31887	1.59	1.2E-01	M26925.1	NT	IL0-CT0031-221099-113-e04 CT0031 Homo sapiens cDNA
6755	19348	32157	0.98	1.2E-01	BF347985.1	EST_HUMAN	Mouse galactosyltransferase mRNA, complete cds
7833	20375		1.31	1.2E-01	BE007072.1	EST_HUMAN	602023112F1 NCI CGAP_Bim67 Homo sapiens cDNA clone IMAGE:4158386 5'
							PM3-BN0137-290300-002-009 BN0137 Homo sapiens cDNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7803	20445	33351	3.58	1.2E-01	AI913753.1	EST_HUMAN	wc99g03.x1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:2328804 3' similar to SW:GST2_HUMAN
7850	20492	33401	0.72	1.2E-01	Q02369	SWISSPROT	Q99735 MICROSOMAL GLUTATHIONE S-TRANSFERASE II;
8251	20792	33709	0.9	1.2E-01	AI832681.1	EST_HUMAN	NADH-UBIQUINONE OXIDOREDUCTASE B22 SUBUNIT (COMPLEX I-B22) (Cl-B22)
8335	20876		9.03	1.2E-01	AW083652.1	EST_HUMAN	at71b10.x1 Barstead colon HPLRB7 Homo sapiens cDNA clone IMAGE:2377435 3'
							xc49d07.x1 NCI_CGAP_Eso2 Homo sapiens cDNA clone IMAGE:2587597 3' similar to gb:M13452 LAMIN A (HUMAN);
8355	20895		4.17	1.2E-01	AF053772.1	NT	Staphylococcus aureus plasmid pSK23 putative recombinase Sin (sin) gene, partial cds; and transcriptional regulator QacR (qacR) and multidrug efflux protein QacB (qacB) genes, complete cds
8392	20932	33852	0.92	1.2E-01	J03956.1	NT	N crassa vacuolar ATPase 57-Kd subunit (vma-2) gene, complete cds
8392	20932	33853	0.92	1.2E-01	J03956.1	NT	N crassa vacuolar ATPase 57-Kd subunit (vma-2) gene, complete cds
8537	21076		0.83	1.2E-01	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region, segment 2/2
8623	21162		2.14	1.2E-01	U32714.1	NT	Haemophilus influenzae Rd section 28 of 163 of the complete genome
8657	21198		0.85	1.2E-01	X15191.1	NT	M. musculus DNA fragment of Apolipoprotein B gene
9491	21947	34896	2.66	1.2E-01	X77961.1	NT	S. cerevisiae HXT5 gene
9818	22414	35389	2.65	1.2E-01	AV710857.1	EST_HUMAN	AV710857 Cu Homo sapiens cDNA clone CUAKE08 5'
10155	22650	35644	0.48	1.2E-01	AI718395.1	EST_HUMAN	as59g09.x1 Barstead colon HPLRB7 Homo sapiens cDNA clone IMAGE:2333056 3'
10768	23280		3.58	1.2E-01	D26184.1	NT	Yeast MPT5 gene for suppressor protein, complete cds
10944	23460		3.97	1.2E-01	BE962324.2	EST_HUMAN	60165578R1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3846283 3'
11028	23540		1.62	1.2E-01	BF314481.1	EST_HUMAN	601900763F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4130103 5'
11134	23642	36882	2.67	1.2E-01	AF190493.1	NT	Homo sapiens dynein intermediate chain DNAI1 (DNAI1) gene, exon 17
11193	23698	36748	1.57	1.2E-01	R40249.1	EST_HUMAN	yf80c02.s1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:28880 3'
11382	23834		1.8	1.2E-01	M65109.1	NT	Rabbit glycogen-associated protein phosphatase regulatory subunit (RG1) mRNA, complete cds
11687	24080		4.22	1.2E-01	AV658033.1	EST_HUMAN	AV658033 GLC Homo sapiens cDNA clone GLCFIB12 3'
12029	24319		4.43	1.2E-01	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region, segment 2/2
12109	25038	30503	3.9	1.2E-01	Q04912	SWISSPROT	MACROPHAGE-STIMULATING PROTEIN RECEPTOR PRECURSOR (MSP RECEPTOR) (P185-RON) (CDW136) (CD136 ANTIGEN)
12228	24447		1.95	1.2E-01	AF188892.1	NT	Drosophila melanogaster strain Oregon R potential RNA-binding protein gene, complete cds; and syntactin gene, partial cds
12230	13203		17.94	1.2E-01	AF039442.1	NT	Homo sapiens colon cancer antigen NY-CO-45 mRNA, partial cds
12345	24526		1.81	1.2E-01	X53981.1	NT	R. norvegicus NF68 gene for 68kDa neurofilament
12440	24577	30915	6.5	1.2E-01	AI289903.1	EST_HUMAN	qn20g05.x1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1868840 3'
12463	24591		2.19	1.2E-01	L10187.1	NT	Xenopus laevis integrin alpha 3 subunit mRNA, partial cds
12468	24872		9.71	1.2E-01	O96433	SWISSPROT	CYCLIN T

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
12649	16130		1.65	1.2E-01	Z99118.1	NT	Bacillus subtilis complete genome (section 15 of 21); from 2795131 to 3013540
590	13220	25696	0.8	1.1E-01	AI561003.1	EST_HUMAN	h18d08.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2167983 3'
643	13266	25743	2.98	1.1E-01	AA568006.1	EST_HUMAN	nm08g11.s1 NCI_CGAP_Cot10 Homo sapiens cDNA clone IMAGE:1059620 3' similar to gb.X06985_mai
1092	13697	26207	1.54	1.1E-01	BF667308.1	EST_HUMAN	HEME OXYGENASE 1 (HUMAN);
1124	13727		1.49	1.1E-01	AL161560.2	NT	602129847F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4286771 5'
1201	15435	26314	3.68	1.1E-01	AW972158.1	EST_HUMAN	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 60
1292	13887	26411	1.89	1.1E-01	D64004.1	NT	EST384142 MAGE resequences, MAGL Homo sapiens cDNA
1568	14160	26691	2.94	1.1E-01	AU140363.1	EST_HUMAN	Synechocystis sp. PCC6803 complete genome, 23/27, 2888767-3002365
2353	14924		3.72	1.1E-01	6755215	NT	AU140363 PLACE2 Homo sapiens cDNA clone PLACE2000403 5'
2578	15401		1.24	1.1E-01	6978676	NT	Mus musculus pre T-cell antigen receptor alpha (Ptra), mRNA
2602	15164		1.06	1.1E-01	AW821909.1	EST_HUMAN	Rattus norvegicus Procollagen II alpha 1 (Ccl2a1), mRNA
2880	15498	27968	1.17	1.1E-01	S82418.1	NT	RCO-ST0379-210100-032-g04 ST0379 Homo sapiens cDNA
3068	15683	28155	0.78	1.1E-01	F03265.1	EST_HUMAN	interleukin-12 p35 subunit [mice, Genomic, 700 nt, segment 4 of 5]
3385	15994		1.87	1.1E-01	6753231	NT	HSC1RF022 normalized infant brain cDNA Homo sapiens cDNA clone c-1f02 3'
3468	16075	28548	2.27	1.1E-01	BE393186.1	EST_HUMAN	Mus musculus calcium channel, voltage-dependent, T type, alpha 1G subunit (Ca $\alpha$ 1g), mRNA
3499	16104	28579	1.59	1.1E-01	X62135.1	NT	601308678F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3627066 5'
3538	16143	28626	0.59	1.1E-01	R96946.1	EST_HUMAN	C.reinhardtii nuclear gene on linkage group XIX
3642	16245	28720	0.8	1.1E-01	Y07695.1	NT	y62g08.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:200414 3' similar to contains
3763	16364		1.35	1.1E-01	P97384	SWISSPROT	Alu repetitive element;
3771	16372	28837	1.61	1.1E-01	X52708.1	NT	A.immersus gene for transposase
4188	16778	29223	1.61	1.1E-01	AW819412.1	EST_HUMAN	ANNEXIN XI (CALCYCLIN-ASSOCIATED ANNEXIN 50) (CAP-50)
4339	16926	29224	1.61	1.1E-01	AF157066.1	NT	G.gallus gene encoding non-histone chromosomal protein HMG-14b, exons 4 and 5
4374	16961	29407	0.63	1.1E-01	AW802056.1	EST_HUMAN	MR3-ST0290-280100-025-g07 ST0290 Homo sapiens cDNA
4745	17326	29768	1.11	1.1E-01	S44957.1	NT	MR3-ST0290-280100-025-g07 ST0290 Homo sapiens cDNA
4958	17533	29975	1.21	1.1E-01	Y07695.1	NT	Drosophila melanogaster klarsicht protein (klar) mRNA, complete cds
5169	16784		0.78	1.1E-01	AF030001.1	NT	IL5-UM0070-020500-068-g08 UM0070 Homo sapiens cDNA
5431	17988	30392	4.82	1.1E-01	AV730599.1	EST_HUMAN	Tapa-1=integral membrane protein TAPA-1 [mice, B cell lymphoma line 38C13, Genomic, 1973 nt, segment 1 of 7]
5431	17988	30393	4.82	1.1E-01	AV730599.1	EST_HUMAN	A.immersus gene for transposase
							Mus musculus major histocompatibility locus class III region: butyrophilin-like protein gene, partial cds; Notch4, PBX2, RAGE, lysophosphatidic acid acyl transferase-alpha, palmitoyl-protein thioesterase 2 (PPT2), CREB-RP, and tenascin X (TNX) genes, complete>
							AV730599 HTF Homo sapiens cDNA clone HTFAAC12 5'
							AV730599 HTF Homo sapiens cDNA clone HTFAAC12 5'

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5435	18245	28720	0.57	1.1E-01	Y07695.1	NT	A.immerus gene for: transposase
5850	18474		4.49	1.1E-01	AA747216.1	EST_HUMAN	nx78a03.s1 NCL_CGAP_Ew1 Homo sapiens cDNA clone IMAGE:1288140 similar to contains Alu repetitive element; contains element MER35 repetitive element.
5914	18538	31261	1.17	1.1E-01	AF020927.1	NT	6 Homo sapiens diacylglycerol kinase 3 (DAGK3) gene, exon 6
5974	18594	31328	0.84	1.1E-01	BF339519.1	EST_HUMAN	602039176F1 NCL_CGAP_Bm64 Homo sapiens cDNA clone IMAGE:4186818 5'
5974	18594	31328	0.84	1.1E-01	BF339519.1	EST_HUMAN	602039176F1 NCL_CGAP_Bm64 Homo sapiens cDNA clone IMAGE:4186818 5'
6001	18621	31356	2	1.1E-01	X68851.1	NT	S.pombe ste8 gene encoding protein kinase
6031	18650	31391	5.02	1.1E-01	M86533.1	NT	Providencia rettgeri penicillin G amidase gene
6177	18787	31555	1.75	1.1E-01	AJ007973.1	NT	Homo sapiens LGMD2B gene
6197	18807	31578	1.6	1.1E-01	BE768152.1	EST_HUMAN	PM3-F10024-130600-004-f12 FT0024 Homo sapiens cDNA
6216	18826	31598	7.81	1.1E-01	AW853699.1	EST_HUMAN	RC3-CT0254-280999-011-e01 CT0254 Homo sapiens cDNA
6562	19160	31958	1.38	1.1E-01	AF035746.1	EST_HUMAN	AF035746 Human salivary gland cell line HSG Homo sapiens cDNA clone RL43
6599	19186	32001	0.84	1.1E-01	AI216307.1	EST_HUMAN	qg78d06.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1841099 3'
6721	19315	32118	3.92	1.1E-01	D69835	SWISSPROT	ACETYL-COENZYME A SYNTHETASE (ACETATE-COA LIGASE) (ACYL-ACTIVATING ENZYME)
6805	19396		3.07	1.1E-01	AF032922.1	NT	Homo sapiens syntrophin 4 binding protein UNC-18c (UNC-18c) mRNA, complete cds
6888	19623	32458	2.36	1.1E-01	11432372	NT	Homo sapiens phosphatidylinositol glycan, class B (PIGB), mRNA
7238	25119		0.97	1.1E-01	BF382798.1	EST_HUMAN	601816524F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4050853 5'
7345	24780	32737	0.92	1.1E-01	AP000006.1	NT	Pyrococcus horikoshii OT3 genomic DNA, 1168001-1485000 nt, position (8/7)
7542	20062	32835	7.24	1.1E-01	BF684628.1	EST_HUMAN	602140976F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4302019 5'
7542	20062	32836	7.24	1.1E-01	BF684628.1	EST_HUMAN	602140976F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4302019 5'
7651	20163	33051	1.85	1.1E-01	P41067	SWISSPROT	TRAB PROTEIN
7882	20183		0.7	1.1E-01	Z14098.1	NT	B subtilis gene encoding hypothetical polypeptide synthase
7683	20184	33082	3.53	1.1E-01	AA788784.1	EST_HUMAN	ah31b06.s1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone 1240403 3' similar to gb:J03483
7909	20451	33358	1.41	1.1E-01	U67492.1	NT	CHROMOGRAININ A PRECURSOR (HUMAN).
8149	20680	33903	1.6	1.1E-01	AA493574.1	EST_HUMAN	Methanococcus jannaschii section 34 of 150 of the complete genome
8149	20680	33904	1.6	1.1E-01	AA493574.1	EST_HUMAN	nh04g10.s1 NCL_CGAP_Thy1 Homo sapiens cDNA clone IMAGE:943382
8197	20738	33950	1.18	1.1E-01	X91233.1	NT	nh04g10.s1 NCL_CGAP_Thy1 Homo sapiens cDNA clone IMAGE:943382
8235	20776		1.15	1.1E-01	AW87818.1	EST_HUMAN	H. sapiens IL15 gene
8292	20833	33755	1.54	1.1E-01	AI134349.1	EST_HUMAN	PM1-ST0270-080200-001-f09 ST0270 Homo sapiens cDNA
							DKFZp547P194.r1 547 (synonym: rfr1) Homo sapiens cDNA clone DKFZp547P194 5'
8752	21291	34211	8.48	1.1E-01	U02482.1	NT	Pedococcus acidilactici H plasmid pSMB74 pediocin (pap) gene cluster papA, papB, papC and papD genes, complete cds
8843	21382	34307	0.87	1.1E-01	AI807474.1	EST_HUMAN	wf48c01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2358816 3' similar to contains Alu repetitive element

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8938	21476	34397	0.48	1.1E-01	AF050081.1	NT	Homo sapiens C16orf3 large protein mRNA, complete cds
8973	21511	34433	2.22	1.1E-01	AA192153.1	EST_HUMAN	z93b12.11 Stratagene muscle 937209 Homo sapiens cDNA clone IMAGE:627743 5'
8973	21511	34434	2.22	1.1E-01	AA192153.1	EST_HUMAN	z93b12.11 Stratagene muscle 937209 Homo sapiens cDNA clone IMAGE:627743 5'
9062	21599	34529	0.82	1.1E-01	Y12727.1	NT	P. furiosus partial dph5 gene and argF gene
9092	21628	34565	2.28	1.1E-01	T72675.1	EST_HUMAN	y19f03.s1 Soares fetal liver spleen INFLS Homo sapiens cDNA clone IMAGE:108725 3' similar to gb:M81181 SODIUM/POTASSIUM-TRANSPORTING ATPASE BETA-2 (HUMAN);
9119	21655		0.67	1.1E-01	BE893280.1	EST_HUMAN	601436972F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3922048 5'
9343	21857		1.13	1.1E-01	BE142305.1	EST_HUMAN	CM3-HT0142-271099-026-g11 HT0142 Homo sapiens cDNA
9417	21928		2.2	1.1E-01	BF085149.1	EST_HUMAN	MR2-GN0027-040900-005-a08 GN0027 Homo sapiens cDNA
9824	22322		0.5	1.1E-01	AL161543.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 43
10107	22602		1.03	1.1E-01	R80590.1	EST_HUMAN	y98a09.s1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:147064 3'
10240	22735	35727	0.86	1.1E-01	U60529.1	NT	Ceratitis capitata yoyo retrotransposon gag-like, pol-like and env-like genes, complete cds
10554	23090	36104	1.6	1.1E-01	AF245277.1	NT	Dicystotellium discoidium kinesin Unc104/KIF1a homolog (Unc104) mRNA, complete cds
10684	15683	28155	2.12	1.1E-01	F03285.1	EST_HUMAN	HSC1RF022 normalized infant brain cDNA Homo sapiens cDNA clone c-1rf02 3'
10802	23325		3.23	1.1E-01	AF169032.1	NT	Carassius auratus activin beta A precursor, mRNA, complete cds
10923	23442	36463	3.76	1.1E-01	R23708.1	EST_HUMAN	y935f12.1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:131759 5' similar to contains Alu repetitive element; contains TAR1 repetitive element ;
10931	23449	36470	1.85	1.1E-01	698135.1	NT	Rattus norvegicus Phosphofructokinase, liver, B-type (Pfk), mRNA
10947	18567	31298	1.56	1.1E-01	AL110985.1	NT	Botrytis cinerea strain T4 cDNA library under conditions of nitrogen deprivation
11080	23572	36609	1.74	1.1E-01	X70058.1	NT	M. musculus cytokine gene
11085	23597	36633	3.35	1.1E-01	Z11910.1	NT	Z. mobilis tgf and lig genes encoding tRNA guanine transglycosylase and DNA ligase
11085	23597	36634	3.35	1.1E-01	Z11910.1	NT	Z. mobilis tgf and lig genes encoding tRNA guanine transglycosylase and DNA ligase
11186	23691	36738	2.99	1.1E-01	P17437	SWISSPROT	SKIN SECRETORY PROTEIN XP2 PRECURSOR (APEG PROTEIN)
11884	24231		4.61	1.1E-01	BE767023.1	EST_HUMAN	RC2-NT0112-120600-014-f03 NT0112 Homo sapiens cDNA
12143	24835		3.29	1.1E-01	BE974556.1	EST_HUMAN	601680551R2 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:3950604 3'
12597	24684	30880	1.89	1.1E-01	BF239753.1	EST_HUMAN	601906350F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4134085 5'
1243	13841		2.35	1.0E-01	O62855	SWISSPROT	DEOXYRIBONUCLEASE II PRECURSOR (DNASE II) (ACID DNASE) (LYSOSOMAL DNASE II)
1315	13909	26429	1.92	1.0E-01	A1985499.1	EST_HUMAN	ws08d01.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2496577 3' similar to contains MER7.13
1436	14029	26557	2.23	1.0E-01	AL161504.2	NT	MER7 repetitive element ;
2531	15095	27687	0.97	1.0E-01	AW451365.1	EST_HUMAN	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 16
3563	16167	28649	1.04	1.0E-01	BF033991.1	EST_HUMAN	UI-H-B13-alc-d-07-0-UI s1 NCI CGAP Sub5 Homo sapiens cDNA clone IMAGE:2736420 3'
3782	16382	28847	0.82	1.0E-01	BF239818.1	EST_HUMAN	601456301F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3859849 5'
3904	16503	28984	1.41	1.0E-01	AF297061.1	NT	601806489F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4134071 5'
							Escherichia coli enterotoxin EspC (espC) gene, complete cds; and unknown genes

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3904	16503	28965	1.41	1.0E-01	AF297061.1	NT	Escherichia coli enterotoxin EspC (espC) gene, complete cds; and unknown genes
4027	16625	29097	2.82	1.0E-01	BF365703.1	EST_HUMAN	QV2-NT0048-160800-316-e05 NT0048 Homo sapiens cDNA
4498	17080	28528	1.62	1.0E-01	AE002285.2	NT	Chlamydomonas reinhardtii AR39, section 91 of 94 of the complete genome
4853	17235		0.87	1.0E-01	AI792349.1	EST_HUMAN	an32c04.y6 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:1700358 5'
4822	17400	28853	1.8	1.0E-01	U50450.1	NT	Drosophila melanogaster tyrosine kinase p45 isoform (fer) mRNA, complete cds
4820	17485	28946	0.86	1.0E-01	AA765434.1	EST_HUMAN	oa05h03.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1304117 3'
5050	17623	30068	2.12	1.0E-01	AW952344.1	EST_HUMAN	EST384414 MAGE resequences, MAGB Homo sapiens cDNA
5408	17965	30375	1.06	1.0E-01	AV721471.1	EST_HUMAN	AV721471 HTB Homo sapiens cDNA clone HTBBQE10 5'
5415	17972		0.88	1.0E-01	AV763960.1	EST_HUMAN	AV763960 MDS Homo sapiens cDNA clone MDSBQB11 5'
5524	18158		8.57	1.0E-01	W86490.1	EST_HUMAN	zh62h04.s1 Soares fetal liver spleen, 1NFLS_S1 Homo sapiens cDNA clone IMAGE:416695 3'
6040	18659		0.95	1.0E-01	AK024472.1	NT	Homo sapiens mRNA for FLJ00085 protein, partial cds
6175	18786	31554	11.01	1.0E-01	AF274875.1	NT	Homo sapiens growth factor receptor-bound protein 7 (GRB7) gene, complete cds
6477	19078	31881	0.98	1.0E-01	AA481879.1	EST_HUMAN	zv41g10.s1 Soares ovary tumor NihHOT Homo sapiens cDNA clone IMAGE:756258 3' similar to contains
6489	19090	31873	0.82	1.0E-01	AA406039.1	EST_HUMAN	L1 L1 repetitive element;
7091	19662		1.71	1.0E-01	R23821.1	EST_HUMAN	yz34h06.r1 Soares placenta NbZHP Homo sapiens cDNA clone IMAGE:131675 5' similar to contains Alu
7717	20225		2.33	1.0E-01	Y12488.1	NT	repetitive element;
7874	20416	33324	0.53	1.0E-01	AA861091.1	EST_HUMAN	M.musculus wtn gene
8107	20848		0.8	1.0E-01	4758385	NT	ak32g01.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1407698 3' similar to gb:M34182 CAMP-
8429	20969		0.83	1.0E-01	AW169787.1	EST_HUMAN	DEPENDENT PROTEIN KINASE, GAMMA-CATALYTIC SUBUNIT (HUMAN);
9113	21849	34560	1.08	1.0E-01	AF102855.2	NT	Homo sapiens fibroblast growth factor 13 (FGF13) mRNA
9416	21925	34873	0.49	1.0E-01	R44993.1	EST_HUMAN	rib0601.x1 NCI_CGAP_U14 Homo sapiens cDNA clone IMAGE:2875689 3' similar to gb:X17208 40S
9428	21935		2.05	1.0E-01	M76729.1	NT	RIBOSOMAL PROTEIN S4 (HUMAN);contains TAR1.3 TAR1 repetitive element ;
9469	21968		2.67	1.0E-01	AE001501.1	NT	Rattus norvegicus synaptic SAPAP-interacting protein Synapton mRNA, complete cds
9483	21940	34688	0.71	1.0E-01	W01855.1	EST_HUMAN	yq33h04.s1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:34549 3'
9735	22233	35211	1.87	1.0E-01	BF240154.1	EST_HUMAN	Human pro-alpha-1 (V) collagen mRNA, complete cds
9848	22346	35327	8.17	1.0E-01	AB046798.1	NT	Helicobacter pylori, strain J99 section 82 of 132 of the complete genome
10048	22543		2.05	1.0E-01	AW957425.1	EST_HUMAN	ze66c10.s1 Soares fetal heart_NbHH19W Homo sapiens cDNA clone IMAGE:327282 3'
10053	22548	35542	0.61	1.0E-01	TS1952.1	EST_HUMAN	601805661F1NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4133487 5'
							Homo sapiens mRNA for KIAA1579 protein, partial cds
							Homo sapiens mRNA for KIAA1579 protein, partial cds
							Homo sapiens mRNA for KIAA1579 protein, partial cds
							EST369615 MAGE resequences, MAGE Homo sapiens cDNA
							y628a08.s1 Stratagene fetal spleen (#937205) Homo sapiens cDNA clone IMAGE:72562 3' similar to
							contains Alu repetitive element

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10234	22729	35720	1.08	1.0E-01	BE792750.1	EST_HUMAN	601584604F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3939098 5'
10537	23074		2.11	1.0E-01	AU159127.1	EST_HUMAN	AU159127 THYRO1 Homo sapiens cDNA clone THYRO1000895 3'
10910	23429	36448	3.33	1.0E-01	BF242946.1	EST_HUMAN	601877703F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4106089 5'
10910	23429	36449	3.33	1.0E-01	BF242946.1	EST_HUMAN	601877703F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4106089 5'
11278	23731	36786	5.03	1.0E-01	BE790543.1	EST_HUMAN	6015832558F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3936734 5'
11870	24581		3.49	1.0E-01	BE537719.1	EST_HUMAN	601085554F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3451933 5'
12104	24366		1.74	1.0E-01	7662165	NT	Homo sapiens KIAA0514 gene product (KIAA0514), mRNA
12122	24380		1.36	1.0E-01	X00854.1	NT	Drosophila melanogaster ftz gene
12336	24519		2.27	1.0E-01	AA737961.1	EST_HUMAN	nx11c08.s1 NCL_CGAP_GC3 Homo sapiens cDNA clone IMAGE:1255790 3'
12413	25031		4.74	1.0E-01	U52691.1	NT	Gonyaulax polyedra putative type-1 serine/threonine phosphatase (PP1) mRNA, complete cds
12445	24581		2.17	1.0E-01	BE537719.1	EST_HUMAN	601085554F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3451933 5'
12495	24623		1.93	1.0E-01	BE158905.1	EST_HUMAN	QV4-H10401-211289-064-g03 HT0401 Homo sapiens cDNA
12511	25001		41.15	1.0E-01	U66834.1	NT	Saccharomyces cerevisiae suppressor of ABF1 (SAB2) gene, complete cds
12578	24874		7.73	1.0E-01	AP001507.1	NT	Bacillus halodurans genomic DNA, section 1/14
2808	15358	27925	0.93	9.8E-02	AF274008.1	NT	Drosophila melanogaster cAMP-dependent protein kinase type II regulatory subunit (pka-R11) mRNA, complete cds
2813	15365	27934	1.95	9.8E-02	BE545554.1	EST_HUMAN	601070219F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3456365 5'
2813	15365	27935	1.95	9.8E-02	BE545554.1	EST_HUMAN	601070219F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3456365 5'
3305	15916	28393	1.96	9.8E-02	AF099810.1	NT	Homo sapiens neuridin III-alpha gene, partial cds
4025	16623	29095	0.64	9.8E-02	A1821637.1	EST_HUMAN	zu45c03.x5 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:740932 3'
7049	18068	30459	9.12	9.8E-02	D83710.1	NT	Aspergillus terreus BSD mRNA for blesticidin S deaminase, complete cds
7856	20398	33304	0.65	9.8E-02	AW103088.1	EST_HUMAN	xd43c09.x1 NCL_CGAP_Ov23 Homo sapiens cDNA clone IMAGE:2596528 3' similar to contains Alu repetitive element; contains element MIR MIR repetitive element
7856	20398	33305	0.65	9.8E-02	AW103088.1	EST_HUMAN	xd43c09.x1 NCL_CGAP_Ov23 Homo sapiens cDNA clone IMAGE:2596528 3' similar to contains Alu repetitive element; contains element MIR MIR repetitive element
9181	21758	34704	1.1	9.8E-02	6755111	NT	Mus musculus phospholipid transfer protein (Pltp), mRNA
589	13219		1.48	9.8E-02	X56338.1	NT	O sativa RAmY3C gene for alpha-amylase
3179	15792	28263	4.23	9.8E-02	AF184274.1	NT	Daucus carota leucoanthocyanidin dioxygenase 2 (LDOX) mRNA, LDOX-2 allele, complete cds
4308	16894	29337	8.69	9.8E-02	AF257329.1	NT	Leptosphaeria maculans beta-tubulin mRNA, complete cds
4308	16894	29338	8.69	9.8E-02	AF257329.1	NT	Leptosphaeria maculans beta-tubulin mRNA, complete cds
7495	20018		0.99	9.8E-02	X54133.1	NT	Human HP TP delta mRNA for protein tyrosine phosphatase delta
9178	21755		1.05	9.8E-02	M61943.1	NT	Human laminin B1 chain gene, exon 26
11334	23032	36041	2.27	9.8E-02	BF037421.1	EST_HUMAN	601460793F1 NIH_MGC_86 Homo sapiens cDNA clone IMAGE:3864287 5'
11840	24203		1.46	9.8E-02	8393751	NT	Rattus norvegicus microtubule-associated protein tau (Mapt), mRNA



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1394	13988	26518	1.24	9.7E-02	AB005808.1	NT	Alce arborescens mRNA for NADP-malic enzyme, complete cds
1628	14221		1.75	9.7E-02	4503710	NT	Homo sapiens fibroblast growth factor receptor 3 (achondroplasia, thanatophoric dwarfism) (FGFR3) mRNA
2301	14874	27450	2.11	9.7E-02	BE188680.1	EST_HUMAN	QV1-HT0516-070300-095-a04 HT0516 Homo sapiens cDNA
4055	18652		4.78	9.7E-02	Q99795	SWISSPROT	CELL SURFACE A33 ANTIGEN PRECURSOR (GLYCOPROTEIN A33)
5548	18180	30594	1.01	9.7E-02	AF099189.1	NT	Caulobacter crescentus thymidylate kinase (tmk) and DNA polymerase III delta prime subunit (dnaC) genes, complete cds
5548	18180	30595	1.01	9.7E-02	AF099189.1	NT	Caulobacter crescentus thymidylate kinase (tmk) and DNA polymerase III delta prime subunit (dnaC) genes, complete cds
6185	18777	31541	1.28	9.7E-02	AW954478.1	EST_HUMAN	EST368546 MAGC resequences, MAGC Homo sapiens cDNA
7340	18867	32731	3.26	9.7E-02	Z99119.1	NT	Bacillus subtilis complete genome (section 16 of 21); from 2897771 to 3213410
7924	20468	33374	1.28	9.7E-02	N22798.1	EST_HUMAN	yw41c03.s1 Weizmann Offactory Epithelium Homo sapiens cDNA clone IMAGE:254788 3'
7924	20468	33375	1.28	9.7E-02	N22798.1	EST_HUMAN	yw41c03.s1 Weizmann Offactory Epithelium Homo sapiens cDNA clone IMAGE:254788 3'
8783	21322	34246	1.47	9.7E-02	A1953884.1	EST_HUMAN	wx78508.x1 NCI CGAP_Ov38 Homo sapiens cDNA clone IMAGE:2549747 3' similar to gb:X52851_ma1
11078	23588		2.34	9.7E-02	U58337.1	NT	PEPTIDYL-PROLYL CIS-TRANS ISOMERASE A (HUMAN);
2060	14840	27213	1.33	9.6E-02	A1080721.1	EST_HUMAN	Mus musculus ligatin (Lgtn) mRNA, partial cds
2060	14840	27214	1.33	9.6E-02	A1080721.1	EST_HUMAN	alpha47d11.x1 Soares_NihHMPu_S1 Homo sapiens cDNA clone IMAGE:1678485 3'
4437	17023	29463	7.54	9.6E-02	Z32886.2	NT	alpha47d11.x1 Soares_NihHMPu_S1 Homo sapiens cDNA clone IMAGE:1678485 3'
5142	17713	30144	1.03	9.6E-02	AW888230.1	EST_HUMAN	Proteus mirabilis fimbrial operon, strain HI4320
6254	18963		2.74	9.6E-02	BE910039.1	EST_HUMAN	EST378303 MAGC resequences, MAGI Homo sapiens cDNA
8317	20858		0.81	9.6E-02	AU137084.1	EST_HUMAN	601498088F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3900165 5'
8463	21888	34844	1.34	9.6E-02	AV687898.1	EST_HUMAN	60137084 PLACE1 Homo sapiens cDNA clone PLACE1005740 5'
9786	22284		1.35	9.6E-02	BE894895.1	EST_HUMAN	AV687898 GKG Homo sapiens cDNA clone GKCAH02 5'
9952	22447	35429	1.21	9.6E-02	AJ243211.1	NT	601434080F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3918363 5'
9952	22447	35430	1.21	9.6E-02	AJ243211.1	NT	Homo sapiens DMBT1 candidate tumour suppressor gene, exons 1 to 55
10055	22550	35544	1.26	9.6E-02	AB013985.1	NT	Homo sapiens DMBT1 candidate tumour suppressor gene, exons 1 to 55
10055	22550	35544	1.26	9.6E-02	AB013985.1	NT	Antirrhinum majus transposon Tam3 pseudogene for transposase (in S-5 copy)
10159	22854	35649	3.43	9.6E-02	P08174	SWISSPROT	Antirrhinum majus transposon Tam3 pseudogene for transposase (in S-5 copy)
10821	23153	36165	7.28	9.6E-02	Z79702.1	NT	COMPLEMENT DECAY-ACCELERATING FACTOR PRECURSOR (CD55)
11566	24013	37082	1.81	9.6E-02	AA625755.1	EST_HUMAN	Mycobacterium tuberculosis H37Rv complete genome; segment 102/182
12486	24617		1.55	9.6E-02	H14598.1	EST_HUMAN	zu91g01.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:745392 3'
4177	16768	28217	2.24	9.5E-02	AW892395.1	EST_HUMAN	ym19n03.s1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:48653 3'
5286	17948	30274	1.12	9.5E-02	U63374.1	NT	CM2-BN0023-050200-087-12 BN0023 Homo sapiens cDNA
							Lycopodium obscurum polygalacturonase isoenzyme 1 beta subunit gene, complete cds

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5848	18470	31196	0.82	9.5E-02	P51854	SWISSPROT	TRANSETOLASE 2 (TK 2) (TRANSETOLASE RELATED PROTEIN)
7344	19871	32736	4.47	9.5E-02	AB003473.1	NT	Trimerus flavoviridis DNA for phospholipase A2 inhibitor, complete cds
7569	20086	32963	6.95	9.5E-02	AL181538.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 38
7685	18470	31196	0.9	9.5E-02	P51854	SWISSPROT	TRANSETOLASE 2 (TK 2) (TRANSETOLASE RELATED PROTEIN)
7821	20363	33271	2.04	9.5E-02	BF035861.1	EST_HUMAN	601453842F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3857243 5'
7821	20363	33272	2.04	9.5E-02	BF035861.1	EST_HUMAN	601453842F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3857243 5'
10559	23095	36107	3.19	9.5E-02	BF035861.1	EST_HUMAN	601453842F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3857243 5'
10559	23095	36108	3.19	9.5E-02	BF035861.1	EST_HUMAN	601453842F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3857243 5'
12557	24658		2.4	9.5E-02	AF272732.1	NT	Arabidopsis thaliana putative transcription factor (MYB110) mRNA, complete cds
1873	14459	27015	3.67	9.4E-02	BF671063.1	EST_HUMAN	602150882F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4291917 5'
1904	14489	27050	1.36	9.4E-02	U55944.1	NT	Cavia porcellus 3beta-hydroxysteroid sulfotransferase mRNA, complete cds
1904	14489	27051	1.36	9.4E-02	U55944.1	NT	Cavia porcellus 3beta-hydroxysteroid sulfotransferase mRNA, complete cds
3949	16347	29015	5.59	9.4E-02	Z33059.1	NT	Microsporidium DNA for CONTIG MC073
5383	17842		0.93	9.4E-02	X98106.1	NT	Lactobacillus bacteriophage phig1e complete genomic DNA
6459	19060	31846	0.73	9.4E-02	AF097363.1	NT	Triticum aestivum heat shock protein 101 (Hsp101a) mRNA, complete cds
8536	21075		2.32	9.4E-02	Z46863.1	NT	Acinetobacter sp. cysD, cobQ, cobM, lysS, rubA, rubB, estB, oxyR, ppk, mltA, ORF2 and ORF3 genes
10813	20107	32982	2.33	9.4E-02	L78833.1	NT	Human BRCA1, Rho7 and vti genes, complete cds, and pfs5 gene, partial cds
11722	24934		6.48	9.4E-02	U31815.1	NT	Rattus norvegicus calcium channel alpha-1C subunit (ROB2) mRNA, partial cds
12845	24719	30869	3.54	9.4E-02	U27696.1	NT	Human pepHGT-1 betaine-GABA transporter mRNA, complete cds
3018	15634		1.66	9.3E-02	4809280	NT	Homo sapiens BAI1-associated protein 3 (BAIP3) mRNA
3063	15679		7.31	9.3E-02	6912525	NT	Homo sapiens nasopharyngeal epithelium specific protein 1 (NESG1), mRNA
3295	15908	28387	2.05	9.3E-02	BF575511.1	EST_HUMAN	602133086F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4288289 5'
4232	16820	29269	4.11	9.3E-02	BE391943.1	EST_HUMAN	601266082F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3607653 5'
4232	16820	29270	4.11	9.3E-02	BE391943.1	EST_HUMAN	601266082F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3607653 5'
4940	17418		1.28	9.3E-02	AV732224.1	EST_HUMAN	AV732224 HTF Homo sapiens cDNA clone HTFAUA06 5'
5843	18467		0.73	9.3E-02	AP001507.1	NT	Bacillus halodurans genomic DNA, section 1/14
8190	20731	33643	0.52	9.3E-02	AW566007.1	EST_HUMAN	EST69 Human Fetal Brain MATCHMAKER cDNA Library Homo sapiens cDNA
9052	21989		0.5	9.3E-02	AL113179.1	NT	Botrytis cinerea strain T4 cDNA library under conditions of nitrogen deprivation
9826	22126	35090	2.1	9.3E-02	BE962631.2	EST_HUMAN	601655988F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3855981 3'
10094	22569	35581	3.16	9.3E-02	Q15034	SWISSPROT	HYPOTHETICAL PROTEIN KIAA0032
10094	22589	35582	3.16	9.3E-02	Q15034	SWISSPROT	HYPOTHETICAL PROTEIN KIAA0032
10222	22717		3.82	9.3E-02	AW206117.1	EST_HUMAN	UI-H-B1-afk-h-05-0-U1.s1 NCI CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2723553 3'
11992	24854		2.27	9.3E-02	AJ249850.1	NT	Photobacterium damsela subsp. damsela partial gyrB gene for DNA gyrase B subunit

Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
12378	24885		16.03	9.3E-02	AW468850.1	EST_HUMAN	hd28h12.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2810887 3'
12599	24933		3.18	9.3E-02	AF100956.1	NT	Mus musculus major histocompatibility locus class II region; Fas-binding protein Daxx (DAXX) gene, partial cds; Bing1 (BING1), tapasin (tapasin), RalGDS-like factor (RLF), KE2 (KE2), BING4 (BING4), beta1, 3-galactosyl transferase (beta1,3-galactosyl tr>
249	12909	25390	5.24	9.2E-02	U60315.1	NT	Molluscum contagiosum virus subtype 1, complete genome
249	12909	25391	5.24	9.2E-02	U60315.1	NT	Molluscum contagiosum virus subtype 1, complete genome
249	12909	25392	5.24	9.2E-02	U60315.1	NT	Molluscum contagiosum virus subtype 1, complete genome
2269	14843		1.58	9.2E-02	R54156.1	EST_HUMAN	y98807.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:41618 5'
3213	15825	28302	3.92	9.2E-02	Q28631	SWISSPROT	MAJOR EPIDIDYMI-SPECIFIC PROTEIN E4 (EPIDIDYMAL PROTEIN BE-20)
3345	15955	28430	0.86	9.2E-02	AA534354.1	EST_HUMAN	nt79e01.s1 NCL CGAP_Co3 Homo sapiens cDNA clone IMAGE:926136 3'
3946	16249		1.16	9.2E-02	6755215	NT	Mus musculus pre T-cell antigen receptor alpha (Pctra), mRNA
4322	16908		1.42	9.2E-02	U92048.1	NT	Human herpesvirus 1 strain KOS-63, latency-associated transcript, promoter region
4396	16981		0.65	9.2E-02	BE286722.1	EST_HUMAN	600944365F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2860176 5'
4744	17325	29767	1.44	9.2E-02	X96402.1	NT	G.gallus Mla-CK gene
7951	20483	33402	1.75	9.2E-02	T49920.1	EST_HUMAN	y989e09.r1 Stratagene placenta (#937225) Homo sapiens cDNA clone IMAGE:69808 5' similar to similar to gb:X56009 GUANINE NUCLEOTIDE-BINDING PROTEIN G(S), ALPHA SUBUNIT (HUMAN)
8117	20558	33567	2.11	9.2E-02	X95256.1	NT	H.vulgaris xylose isomerase gene
12656	24930		2.09	9.2E-02	Z22150.1	NT	S.dysgalactiae fnbA gene
448	12677	25134	2.83	9.1E-02	X77665.1	NT	O. cuniculus k12 keratin gene
3733	16334		0.95	9.1E-02	AW372569.1	EST_HUMAN	PM2-B70349-161289-001-f02 BT0349 Homo sapiens cDNA
4582	17165	29608	1.55	9.1E-02	AL161554.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 54
5905	18527	31253	1.5	9.1E-02	AF128756.1	NT	Homo sapiens MSH55 gene, partial cds; and CLIC1, DDAH, G6b, G6c, G5b, G6d, G6e, G6f, BAT5, G5b, CSK2B, BAT4, G4, Apo M, BAT3, BAT2, AIF-1, 1C7, LST-1, LTB, TNF, and LTA genes, complete cds
7420	19944	32809	11.98	9.1E-02	AW160658.1	EST_HUMAN	au74e05.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2781988 5'
7668	20180	33067	0.89	9.1E-02	AF000061.1	NT	Aeropyrum pernix genomic DNA, section 4/7
7695	20204	33091	0.69	9.1E-02	U39073.1	NT	Mus musculus thymopoietin zeta mRNA, complete cds
8855	21394	34317	1.05	9.1E-02	Y14379.1	NT	Homo sapiens gamma adducin gene, exon 9
10325	22819		1.39	9.1E-02	T02984.1	EST_HUMAN	FB18F10 Fetal brain, Stratagene Homo sapiens cDNA clone FB18F10 3'end
10354	22848	35842	1.52	9.1E-02	S74059.1	NT	Tg618-Cyl actin [Tripneustes gratilla=sea urchins, embryos, Genomic, 5275 nt]
10380	22874	35967	0.73	9.1E-02	Y11187.1	NT	A.thaliana RH1, TC1, G14587-5, G14587-6, and PRL 1 genes
11958	24083		2.35	9.1E-02	9633494	NT	Bacteriophage Mu, complete genome
11898	25036		1.62	9.1E-02	AA179901.1	EST_HUMAN	zp38h12.s1 Stratagene muscle 937209 Homo sapiens cDNA clone IMAGE:611783 3' similar to SW:TRT3_HUMAN P45378 TROPONIN T, FAST SKELETAL MUSCLE, ISOFORM BETA ;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11978	24289		2.21	9.1E-02	AF052895.1	NT	Rattus norvegicus cell cycle protein p56CDC gene, complete cds
12467	24877		17.53	9.1E-02	AJ291390.1	NT	Homo sapiens partial MUC3B gene for MUC3B mucin, exons 1-11
12672	24740		1.5	9.1E-02	AF226888.1	NT	Bombyx mori fibrin heavy chain Fib-H (fib-H) gene, complete cds
774	13393	25893	3.92	9.0E-02	P15328	SWISSPROT	FOLATE RECEPTOR ALPHA PRECURSOR (FR-ALPHA) (FOLATE RECEPTOR 1) (FOLATE RECEPTOR, ADULT) (ADULT FOLATE-BINDING PROTEIN) (FBP) (OVARIAN TUMOR-ASSOCIATED ANTIGEN MOV18) (KB CELLS FBP)
1676	14268	26801	6.34	9.0E-02	BE220482.1	EST_HUMAN	h39g10.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3175842 3' similar to contains Alu repetitive element;
2829	15381	27951	1.76	9.0E-02	AF138522.1	NT	HIV-1 p8c095-06 from USA envelope glycoprotein (env) gene, partial cds
2829	15381	27952	1.76	9.0E-02	AF138522.1	NT	HIV-1 p8c095-06 from USA envelope glycoprotein (env) gene, partial cds
3380	15989	28468	0.83	9.0E-02	AF279135.1	NT	Dictyostelium discoideum spore coat structural protein SP65 (colE) gene, complete cds
4387	16973	29422	0.59	9.0E-02	S68757.1	NT	corticosteroid-binding globulin [Saimiri sciureus=squirrel monkeys, liver, mRNA, 1474 nt]
4387	16973	29423	0.59	9.0E-02	S68757.1	NT	corticosteroid-binding globulin [Saimiri sciureus=squirrel monkeys, liver, mRNA, 1474 nt]
4775	17356	28808	1.68	9.0E-02	X65740.2	NT	Plasmodium falciparum P-type ATPase 3 gene
5401	17959	30370	1.12	9.0E-02	Q24597	SWISSPROT	REGULATORY PROTEIN ZESTE
6146	18760	31519	18.48	9.0E-02	W59037.1	EST_HUMAN	z68a12.r1 Soares_fetal_lung_NbHL 19W Homo sapiens cDNA clone IMAGE:297694 5' similar to PIR:S52171 S52171 small G protein - human ;
6820	19410		1.1	9.0E-02	BF062651.1	EST_HUMAN	7h63d03.x1 NCL_CGAP_Co16 Homo sapiens cDNA clone IMAGE:3320845 3' similar to contains Alu repetitive element;
6864	19598	32428	0.77	9.0E-02	R62805.1	EST_HUMAN	y111608.s1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:138903 3'
12300	24497		2.42	9.0E-02	AF022236.1	NT	Escherichia coli strain E2348/69 pathogenicity island, rOrf1 (rOrf1), rOrf2 (rOrf2), EscR (escR), EscS (escS), EscT (escT), EscU (escU), CesD (cesD), EscC (escC), EscJ (escJ), SepZ (sepZ), EscV (escV), EscN (escN), SepQ (sepQ), Tir (tir), OrfU (orfU), >
1486	14079	26617	1.46	8.9E-02	BF701593.1	EST_HUMAN	602129030F2 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4285951 5'
1486	14079	26618	1.46	8.9E-02	BF701593.1	EST_HUMAN	602129030F2 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4285951 5'
2430	14997	27571	9.68	8.9E-02	BE153572.1	EST_HUMAN	PMO-HT0339-251199-003-d01 HT0339 Homo sapiens cDNA
4277	16963		1.79	8.9E-02	AF286055.1	NT	Africhum angustatum AtranFla2 protein (AtranFla2) gene, partial cds
4741	17322	29762	1.91	8.9E-02	AA424887.1	EST_HUMAN	zw03d04.s1 Soares_NhMMPu_S1 Homo sapiens cDNA clone IMAGE:768199 3'
6014	18634	31370	3.35	8.9E-02	AW452122.1	EST_HUMAN	UI-H-B13-alo-f-08-Q-U1.s1 NCL_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:3068294 3'
6014	18634	31371	3.35	8.9E-02	AW452122.1	EST_HUMAN	UI-H-B13-alo-f-08-Q-U1.s1 NCL_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:3068294 3'
6026	18645	31387	3.24	8.9E-02	11433478	NT	Homo sapiens similar to endoglycan (H. sapiens) (LOC63107), mRNA
7244	19773	32830	1.76	8.9E-02	P47259	SWISSPROT	FOLD BIFUNCTIONAL PROTEIN [INCLUDES: METHYLENE TETRAHYDROFOLATE DEHYDROGENASE, METHENYL TETRAHYDROFOLATE CYCLOHYDROLASE]
7559	20077		2.15	8.9E-02	Z79021.1	NT	H. sapiens flow-sorted chromosome 6 HindIII fragment, SC6pa20F8

Table 4

## Single Exon Probes Expressed In Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7894	20538	33439	0.98	8.9E-02	P29475	SWISSPROT	NITRIC-OXIDE SYNTHASE, BRAIN (NOS, TYPE I) (NEURONAL NOS) (N-NOS) (NNOS) (CONSTITUTIVE NOS) (NC-NOS) (BNOS)
8072	20614	33528	0.65	8.9E-02	BF701665.1	EST_HUMAN	602129111F2 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4285827 5'
8072	20614	33529	0.69	8.9E-02	BF701665.1	EST_HUMAN	602129111F2 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4285827 5'
8534	21073	33993	4.81	8.9E-02	AA309319.1	EST_HUMAN	EST180187 Liver, hepatocellular carcinoma Homo sapiens cDNA 5' end
9538	22038	34998	0.83	8.9E-02	AI285627.1	EST_HUMAN	qu55c05.x1 NCI_CGAP_Lym6 Homo sapiens cDNA clone IMAGE:1968680 3' similar to contains MER10.b1
9538	22038	34999	0.83	8.9E-02	AI285627.1	EST_HUMAN	qu55c05.x1 NCI_CGAP_Lym6 Homo sapiens cDNA clone IMAGE:1968680 3' similar to contains MER10.b1
9648	22147	35118	0.55	8.9E-02	AA339358.1	EST_HUMAN	EST144454 Fetal brain I Homo sapiens cDNA 5' end
11721	24884		2.81	8.9E-02	P19524	SWISSPROT	MYOSIN-2 ISOFORM
11872	24224		4.82	8.9E-02	BF696918.1	EST_HUMAN	602129882F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4286180 5'
12044	24330		3.07	8.9E-02	6680220	NT	Mus musculus hippocampus abundant gene transcript 1 (Hiet1), mRNA
12307	25104		1.57	8.9E-02	U40493.1	NT	Ceratitis capitata mariner transposon transposase gene, complete cds
1418	14009	26538	1.36	8.8E-02	Q27474	SWISSPROT	PROBABLE DNA LIGASE (POLYDEOXYRIBONUCLEOTIDE SYNTHASE [ATP])
3971	18569	28038	1.08	8.8E-02	AA2398128.1	EST_HUMAN	EST11595 Uterus Homo sapiens cDNA 5' end
4106	16700		4.3	8.8E-02	O00268	SWISSPROT	TRANSCRIPTION INITIATION FACTOR TFIID 135 KDA SUBUNIT (TAFII135) (TAFII130) (TAFII130)
4390	16978		0.96	8.8E-02	4580423	NT	Homo sapiens paired box gene 6 (aniridia, keratitis) (PAX6), isoform b, mRNA
8918	21456	34376	1.18	8.8E-02	AA151872.1	EST_HUMAN	zn98a05.s1 Stratagene colon (#837204) Homo sapiens cDNA clone IMAGE:566288 3'
10997	23511	36543	3.11	8.8E-02	BE284455.1	EST_HUMAN	601191770F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3535649 5'
10997	23511	36544	3.11	8.8E-02	BE284455.1	EST_HUMAN	601191770F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3535649 5'
11142	23650	36892	10.81	8.8E-02	AL040129.1	EST_HUMAN	DKFZp434D1313_r1.434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434D1313 5'
11948	24277	31019	1.73	8.8E-02	Z71561.1	NT	S. cerevisiae chromosome XIV reading frame ORF YNL285w
3758	16357	28826	3.9	8.7E-02	U82695.2	NT	Homo sapiens zinc finger protein 92 (ZFP92), expressed-Xq28STS protein (XQ28ORF), and biglycan (BGN) genes, complete cds; and plasma membrane calcium ATPase isoform 3 (PMCA3) gene, partial cds
3758	16357	28827	3.9	8.7E-02	U82695.2	NT	Homo sapiens zinc finger protein 92 (ZFP92), expressed-Xq28STS protein (XQ28ORF), and biglycan (BGN) genes, complete cds; and plasma membrane calcium ATPase isoform 3 (PMCA3) gene, partial cds
4816	17394	29847	1.42	8.7E-02	AF178636.1	NT	Mus musculus JNK interacting protein-3a (Jip3) mRNA, complete cds
5284	17826		1.2	8.7E-02	AE000895.1	NT	Methanobacterium thermoautotrophicum from bases 1176181 to 1189408 (section 101 of 148) of the complete genome
5317	18149	30561	5.18	8.7E-02	AA288875.1	EST_HUMAN	zs55g08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:701438 3'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5517	18149	30562	5.18	8.7E-02	AA286875.1	EST_HUMAN	z555q08.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:701438 3'
6931	19590	32421	0.75	8.7E-02	AJ271885.2	NT	Mus musculus partial Kcnq1 gene for potassium channel protein, exons 10-14
6931	19590	32422	0.75	8.7E-02	AJ271885.2	NT	Mus musculus partial Kcnq1 gene for potassium channel protein, exons 10-14
7803	20346		0.46	8.7E-02	AA284532.1	EST_HUMAN	z20e03.s1 Soares ovary tumor NIHOT Homo sapiens cDNA clone IMAGE:713692 3'
8452	20992	33910	0.64	8.7E-02	AE004787.1	NT	Pseudomonas aeruginosa PA01, section 348 of 529 of the complete genome
8452	20992	33911	0.64	8.7E-02	AE004787.1	NT	Pseudomonas aeruginosa PA01, section 348 of 529 of the complete genome
10590	23125		2.71	8.7E-02	LO4758.1	NT	Oryctolagus cuniculus cytochrome P-450 (CYP4A4) gene, 5' end
11191	23698	36745	1.77	8.7E-02	AJ007763.1	NT	Glucobacter oxydans rRNA-1le and rRNA-Ala genes
11935	24269		2.35	8.7E-02	X17116.1	NT	Human DNA for immunoglobulin alpha heavy chain from a case of alpha heavy chain disease
12142	24389		2.72	8.7E-02	6679057	NT	Mus musculus nidogen 2 (Nid2), mRNA
1295	13889	26412	6.51	8.6E-02	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region, segment 2/2
2286	14860	27435	2.47	8.6E-02	BE408667.1	EST_HUMAN	601304016F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3638643 5'
3222	15834	28312	2.42	8.6E-02	LO5468.1	NT	Trichomonas vaginalis beta-tubulin (tub1) gene, complete cds
3706	16307		4.02	8.6E-02	AF153382.1	NT	Dicystostellum discoidium adenyl cyclase (acrA) gene, complete cds
4584	17167	29610	0.59	8.6E-02	U08179.1	NT	Oryctolagus cuniculus galectin-3 gene, untranslated exon and 5' flanking region
6244	18853	31624	5.78	8.6E-02	Y10828.1	NT	Homo sapiens LCN1b gene
6512	19112	31899	1.56	8.6E-02	J00440.1	NT	Mouse germline IgM chain gene, D region, D-452, mu switch region (part a)
6512	19112	31900	1.56	8.6E-02	J00440.1	NT	Mouse germline IgM chain gene, D region, D-452, mu switch region (part a)
7581	20096	32974	1.14	8.6E-02	P14616	SWISSPROT	INSULIN RECEPTOR-RELATED PROTEIN RECURSOR (IRR) (IR-RELATED RECEPTOR)
7871	20413	33319	1.23	8.6E-02	5730066	NT	Homo sapiens Srf2-related CBP activator protein (SRCAP) mRNA
7871	20413	33320	1.23	8.6E-02	5730066	NT	Homo sapiens Srf2-related CBP activator protein (SRCAP) mRNA
8015	20557	33460	0.76	8.6E-02	11427428	NT	Homo sapiens hypothetical protein FLJ11006 (FLJ11006), mRNA
8073	20615		0.65	8.6E-02	U06168.1	NT	Dicystostellum discoidium proteasome subunit C2 homolog PrtC (prtC) gene, complete cds
9652	22151	35121	1.18	8.6E-02	AF111170.3	NT	Homo sapiens 14q32 Jagged2 gene, complete cds; and unknown gene
9688	22187		1.27	8.6E-02	AW662153.1	EST_HUMAN	hi20c08.x1 NCL_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2872846 3'
10057	22552	35547	0.74	8.6E-02	AF026504.1	NT	Rattus norvegicus SPA-1 like protein p1294 mRNA, complete cds
10824	23345	36360	1.68	8.6E-02	AF206551.1	NT	Lacerta media cytochrome c oxidase subunit 1 gene, partial cds; mitochondrial gene for mitochondrial product
10824	23345	36361	1.68	8.6E-02	AF206551.1	NT	Lacerta media cytochrome c oxidase subunit 1 gene, partial cds; mitochondrial gene for mitochondrial product
11128	23636	36677	4.74	8.6E-02	BF305606.1	EST_HUMAN	601893437F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4139216 5'
11128	23636	36678	4.74	8.6E-02	BF305606.1	EST_HUMAN	601893437F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4139216 5'
11315	23013	36022	7.58	8.6E-02	AE001073.1	NT	Archaeoglobus fulgidus section 34 of 172 of the complete genome
2440	15007	27579	2.52	8.5E-02	AE000652.1	NT	Helicobacter pylori 26695 section 130 of 134 of the complete genome

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5885	18507		1.91	8.5E-02	P08089	SWISSPROT	M PROTEIN, SEROTYPE 6 PRECURSOR
6162	18775	31537	5.94	8.5E-02	AF233885.1	NT	Mus musculus phospholipase C-like protein mRNA, partial cds
8542	21081	34002	1.78	8.5E-02	6754779	NT	Mus musculus myosin XV (Myo15), mRNA
9750	22248	35230	3.08	8.5E-02	BE833054.1	EST_HUMAN	RC4-OT0037-200700-014-e05 OT0037 Homo sapiens cDNA
9750	22248	35231	3.08	8.5E-02	BE833054.1	EST_HUMAN	RC4-OT0037-200700-014-e05 OT0037 Homo sapiens cDNA
10379	22873	35866	0.92	8.5E-02	11418108	NT	Homo sapiens chromosome 22 open reading frame 5 (C22ORF5), mRNA
11035	23549		12.56	8.5E-02	AF155510.1	NT	Homo sapiens heparinase precursor, mRNA, complete cds
11050	23563	36598	4.42	8.5E-02	AB001562.1	NT	Streptococcus mutans gene for glucose-1-phosphate uridylyltransferase, complete cds
12354	24814		5.89	8.5E-02	AJ005598.1	NT	Antirrhinum majus mRNA for MYB-related transcription factor
12536	24847		2.27	8.5E-02	AA362834.1	EST_HUMAN	EST72738 Ovary II Homo sapiens cDNA 5' end
2690	15474	27816	3.71	8.4E-02	W89330.1	EST_HUMAN	cd44e11.1 Soares_fetal_NbHH19W Homo sapiens cDNA clone IMAGE:343532 5'
5200	17765		1	8.4E-02	X01472.1	NT	Drosophila melanogaster copii-like element 17.6
5369	17929	30343	0.88	8.4E-02	5453817	NT	Homo sapiens nucleobindin 1 (NUCB1), mRNA
5515	18147	30559	9.46	8.4E-02	BE287153.1	EST_HUMAN	801180436F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3534393 5'
6791	19382	32197	1.87	8.4E-02	AK024458.1	NT	Homo sapiens mRNA for FLJ00050 protein, partial cds
7972	20514	33421	7.35	8.4E-02	BE095074.1	EST_HUMAN	GM9-B10790-280400-182-d05 BT0760 Homo sapiens cDNA
8776	21315	34237	1.13	8.4E-02	AF218890.1	NT	Homo sapiens attractin precursor (ATRN) gene, exon 2
10265	22760	35747	1.61	8.4E-02	AI735184.1	EST_HUMAN	as88g10.x1 Barstead cdon HPLRB7 Homo sapiens cDNA clone IMAGE:2335842 3' similar to TR:O88312
11858	24217	31042	1.92	8.4E-02	R78408.1	EST_HUMAN	O88312 GOB-4 ;
2056	14637	27208	2.06	8.3E-02	5835680	NT	y83h12.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:146895 5'
2056	14637	27209	2.06	8.3E-02	5835680	NT	Ixodes hexagonus mitochondrion, complete genome
3652	16255	28728	8.98	8.3E-02	P75334	SWISSPROT	Ixodes hexagonus mitochondrion, complete genome
3680	16281	28748	0.68	8.3E-02	AI436797.1	EST_HUMAN	HYPOTHETICAL LIPOPROTEIN MG309 HOMOLOG PRECURSOR
3680	16281	28749	0.68	8.3E-02	AI436797.1	EST_HUMAN	th82g06.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:2125210 3'
5416	17973		1.71	8.3E-02	AW802857.1	EST_HUMAN	th82g08.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:2125210 3'
6408	19009	31791	0.89	8.3E-02	AI942338.1	EST_HUMAN	QV3-NN1025-030500-173-e04 NN1025 Homo sapiens cDNA
6504	19104	31889	3.05	8.3E-02	AF052863.1	NT	w078f11.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2461581 3'
7922	20464	33371	3.57	8.3E-02	AF195787.1	NT	Homo sapiens protocadherin 43 gene, exon 1
7955	20497		1.31	8.3E-02	AA865285.1	EST_HUMAN	Rattus norvegicus dystrophin-related protein 2 A-form splice variant (Drp2) mRNA, complete cds
8241	20782		4.14	8.3E-02	AA987873.1	EST_HUMAN	cg88g08.s1 NCI_CGAP_Kid8 Homo sapiens cDNA clone IMAGE:1592778 3'
9457	21983	34935	1.55	8.3E-02	AW583503.1	EST_HUMAN	cg88g08.s1 NCI_CGAP_Kid8 Homo sapiens cDNA clone IMAGE:1592778 3'
							la05h10.x1 Human Pancreatic Islets Homo sapiens cDNA 3' similar to TR:Q15332 Q15332 GAMMA
							SUBUNIT OF SODIUM POTASSIUM ATPASE LIKE ;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9470	21869		1.94	8.3E-02	AL161595.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 91
10244	22739		0.56	8.3E-02	AF020409.1	NT	Dicotyledonum discolorum DocA (docA) mRNA, complete cds
11550	23998	37070	1.7	8.3E-02	AA700756.1	EST_HUMAN	z62d04.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:435367 3' similar to contains element MER22 repetitive element ;
11953	25040		1.36	8.3E-02	BE958458.1	EST_HUMAN	601644770F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:3929993 5'
1421	14014		9.32	8.2E-02	Y08170.2	NT	Gallus gallus mRNA for OBCAM protein gamma isoform
1542	14134	26688	1.79	8.2E-02	AF167077.2	NT	Canis familiaris glutamate transporter (EAAT4) mRNA, complete cds
3109	15724		2.23	8.2E-02	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C006
3874	16472		1.66	8.2E-02	AL161488.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 10
4079	16675	29136	1.29	8.2E-02	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C006
4371	16958	29400	7.76	8.2E-02	P48960	SWISSPROT	LEUCOCYTE ANTIGEN CD97 PRECURSOR
4371	16958	29401	7.76	8.2E-02	P48960	SWISSPROT	LEUCOCYTE ANTIGEN CD97 PRECURSOR
4371	16958	29402	7.76	8.2E-02	P48960	SWISSPROT	LEUCOCYTE ANTIGEN CD97 PRECURSOR
5240	17804	30225	3.53	8.2E-02	U76009.1	NT	Mus musculus zinc transporter (ZnT-3) gene, complete cds
5400	17958	30369	0.9	8.2E-02	AU119830.1	EST_HUMAN	AU119830 HEMBA1 Homo sapiens cDNA clone HEMBA1006744 5'
5538	18170	30585	1.62	8.2E-02	BE897030.1	EST_HUMAN	601439576F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3924523 5'
7092	19663	32502	3.11	8.2E-02	AF309555.1	NT	Bos taurus connective tissue growth factor precursor (CTGF) gene, complete cds
8707	21246	34169	2.98	8.2E-02	AW875126.1	EST_HUMAN	RC2-PT0004-031299-011-d05 PT0004 Homo sapiens cDNA
9517	22017	34974	4.96	8.2E-02	X04197.1	NT	Beet necrotic yellow vein virus RNA-2
9678	22177	35152	2.2	8.2E-02	BE254318.1	EST_HUMAN	601115055F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3355598 5'
11959	24281	31023	5.69	8.2E-02	AE002246.2	NT	Chlamydomonas reinhardtii growth factor receptor (Egfr) gene, exons 5 through 28, and complete cds, alternatively spliced
12383	24806		4.6	8.2E-02	AF275366.1	NT	Mus musculus epidermal growth factor receptor (Egfr) gene, exons 5 through 28, and complete cds, alternatively spliced
5929	18551	31278	1.08	8.1E-02	AE004006.1	NT	Xylella fastidiosa, section 152 of 229 of the complete genome
6516	19116	31906	0.97	8.1E-02	T11532.1	EST_HUMAN	A1484F Heart Homo sapiens cDNA clone A1484
7248	19777		0.72	8.1E-02	AL163279.2	NT	Homo sapiens chromosome 21 segment HS21C079
7582	20097		1.03	8.1E-02	A1682681.1	EST_HUMAN	wd86f08.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2338503 3'
8281	20822	33741	0.62	8.1E-02	11428974	NT	Homo sapiens hypothetical protein FLJ10060 (FLJ10060), mRNA
8281	20822	33742	0.62	8.1E-02	AY005150.1	NT	Homo sapiens hypothetical protein FLJ10060 (FLJ10060), mRNA
9826	22324		1.7	8.1E-02	AL163202.2	NT	Homo sapiens extracellular glycoprotein lactin precursor, gene, complete cds
11371	23823	36886	1.87	8.1E-02	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
6	15405	25143	9.1	8.0E-02	AW954653.1	EST_HUMAN	EST366723 IMAGE resequences, MAGC Homo sapiens cDNA
971	13582	26095	1.13	8.0E-02	U60315.1	NT	Molluscum contagiosum virus subtype 1, complete genome
1736	15449	26869	10.86	8.0E-02	D26535.1	NT	Human gene for dihydropyrimidine succinyltransferase, complete cds (exon 1-15)



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1736	15449	26870	10.86	8.0E-02	D26835.1	NT	Human gene for dihydriolipamide succinyltransferase, complete cds (exon 1-15)
1947	14531	27087	3.32	8.0E-02	BE067219.1	EST_HUMAN	PM3-BT0347-170200-001-b08 BT0347 Homo sapiens cDNA
2413	14981	27556	1.14	8.0E-02	D90915.1	NT	Synechocystis sp. PCC6803 complete genome, 17/27, 2137259-2267259
2413	14981	27557	1.14	8.0E-02	D90915.1	NT	Synechocystis sp. PCC6803 complete genome, 17/27, 2137259-2267259
2509	15073		4.66	8.0E-02	BF246744.1	EST_HUMAN	601855548F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4075619 5'
2847	13733	26243	0.87	8.0E-02	M23449.1	NT	Dichosium discordeum cyclic nucleotide phosphodiesterase gene, complete cds
2925	15541	28016	0.64	8.0E-02	AL445067.1	NT	Thermoplasma acidophilum complete genome; segment 5/5
3888	16487	28948	0.59	8.0E-02	AW966118.1	EST_HUMAN	EST378191 MAGE resequences, MAGI Homo sapiens cDNA
4148	16738		0.95	8.0E-02	4503034	NT	Homo sapiens cAMP responsive element binding protein-like 2 (CREBL2) mRNA
4890	17465	29920	2.28	8.0E-02	AI434202.1	EST_HUMAN	831902.x1 NCI CGAP Gas4 Homo sapiens cDNA clone IMAGE:2132114 3'
4939	17514		5.81	8.0E-02	X72794.1	NT	Musculus gene for gelatinase B
6051	18669	31408	3.07	8.0E-02	AF275948.1	NT	Homo sapiens ABCA1 (ABCA1) gene, complete cds
7232	18669	31408	1.42	8.0E-02	AF275948.1	NT	Homo sapiens ABCA1 (ABCA1) gene, complete cds
8069	20611	33524	3.68	8.0E-02	AL114993.1	NT	Botrytis cinerea strain T4 cDNA library under conditions of nitrogen deprivation
9311	21825	34773	1.22	8.0E-02	X74208.1	NT	H. sapiens AGT gene, intron 4
9311	21825	34774	1.22	8.0E-02	X74208.1	NT	H. sapiens AGT gene, intron 4
10063	22558		0.57	8.0E-02	AL163208.2	NT	Homo sapiens chromosome 21 segment HS21C009
10671	23203	36216	3.69	8.0E-02	AF217796.1	NT	Homo sapiens SCG10 like-protein, helicase-like protein NHL, M68, and ADP-ribosylation factor related protein 1 (ARFRP1) genes, complete cds
11993	24302	30988	3.6	8.0E-02	AJ005375.1	NT	Drosophila arena hunchback region
12595	16738		3.88	8.0E-02	4503034	NT	Homo sapiens cAMP responsive element binding protein-like 2 (CREBL2) mRNA
2218	14783	27368	4.15	7.9E-02	BE250008.1	EST_HUMAN	600943191F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2859510 5'
3007	15623	28101	11.7	7.9E-02	AF582029.1	EST_HUMAN	ar88c08.x1 Barstead cdon HPLRB7 Homo sapiens cDNA clone IMAGE:2173648 3' similar to gb:226876
							60S RIBOSOMAL PROTEIN L38 (HUMAN);
							Plasmodium falciparum strain Dd2 heat shock protein 86 (HSP86), O1 (o1), O3 (o3), O2 (o2), CG8 (cg8), CG4 (cg4), CG3 (cg3), putative chloroquine resistance transporter (crt), CG8 (cg8), CG1 (cg1), CG6 (cg6), CG2 (cg2), and CG7 (cg7) genes, complete cds
3865	18463	28927	0.92	7.9E-02	AF030694.2	NT	Mus musculus colony stimulating factor 1 receptor (Csfr1), mRNA
3917	16515	28978	3	7.9E-02	6681044	NT	Mus musculus colony stimulating factor 1 receptor (Csfr1), mRNA
3917	16515	28979	3	7.9E-02	6681044	NT	Mus musculus colony stimulating factor 1 receptor (Csfr1), mRNA
4934	17509		1.36	7.9E-02	AB008019.1	NT	Arabidopsis thaliana RXW24L mRNA, partial cds
5390	17948	30360	0.58	7.9E-02	AF035672.1	NT	Mus musculus MHC class I related protein 1 (MR1) gene, complete cds
5390	17948	30361	0.58	7.9E-02	AF035672.1	NT	Mus musculus MHC class I related protein 1 (MR1) gene, complete cds
6798	19389		1.08	7.9E-02	BF368016.1	EST_HUMAN	RC3-GN0042-310800-024-11 GN0042 Homo sapiens cDNA
7075	20517	33424	3.32	7.9E-02	U27832.1	NT	Saccharomyces cerevisiae suppressor of Mif2 Smt4p (SMT4) gene, complete cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9941	22436	35412	4.71	7.9E-02	A1081644.1	EST_HUMAN	ou63b05.s1 NCI_CGAP_Br2 Homo sapiens cDNA clone IMAGE:1632465 3' similar to WP:C37A2.2 CE08611.1
9941	22436	35413	4.71	7.9E-02	A1081644.1	EST_HUMAN	ou63b05.s1 NCI_CGAP_Br2 Homo sapiens cDNA clone IMAGE:1632465 3' similar to WP:C37A2.2 CE08611.1
12479	24613		1.42	7.9E-02	A1761639.1	EST_HUMAN	wg66h01.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2370097 3'
1252	13849	26365	1.36	7.8E-02	A1793275.1	EST_HUMAN	oo59d02.y5 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1570467 5' similar to contains L1.I3 L1 repetitive element ;
1252	13849	26366	1.36	7.8E-02	A1793275.1	EST_HUMAN	oo59d02.y5 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1570467 5' similar to contains L1.I3 L1 repetitive element ;
4912	17487	29943	0.67	7.8E-02	BE836331.1	EST_HUMAN	PM3-FN0058-140700-005-109 FN0058 Homo sapiens cDNA
5247	16412		2.77	7.8E-02	BE250048.1	EST_HUMAN	600943055F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2959663 5'
7136	19475	32297	1.34	7.8E-02	U82695.2	NT	Homo sapiens zinc finger protein 92 (ZFP92), expressed-Xq28STS protein (XQ28ORF), and biglycan (BGN) genes, complete cds, and plasma membrane calcium ATPase isoform 3 (PMCA3) gene, partial cds
7136	19475	32298	1.34	7.8E-02	U82695.2	NT	Homo sapiens zinc finger protein 92 (ZFP92), expressed-Xq28STS protein (XQ28ORF), and biglycan (BGN) genes, complete cds, and plasma membrane calcium ATPase isoform 3 (PMCA3) gene, partial cds
8720	21259	34179	1.46	7.8E-02	BE897947.1	EST_HUMAN	601440439F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3925449 5'
8813	21352	34274	0.6	7.8E-02	X78344.1	NT	S.cerevisiae CAT8 gene
8983	21521	34447	0.83	7.8E-02	AF233437.1	NT	Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-DSP1b mRNA, complete cds
8983	21521	34448	0.83	7.8E-02	AF233437.1	NT	Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-DSP1b mRNA, complete cds
9283	21883	34828	1.08	7.8E-02	AA469354.1	EST_HUMAN	nc88b06.r1 NCI_CGAP_Prl1 Homo sapiens cDNA clone IMAGE:771731
9717	22215	35189	0.5	7.8E-02	Z99124.1	NT	Bacillus subtilis complete genome (section 21 of 21): from 3999281 to 4214814
10544	23081	36094	1.67	7.8E-02	U32323.1	NT	Human interleukin-11 receptor alpha chain gene, complete cds
12384	24550	30906	1.95	7.8E-02	U72847.1	NT	Homo sapiens envoplakin (EVPL) gene, exons 15 through 18
1444	15442	26566	0.91	7.7E-02	AF181897.1	NT	Homo sapiens WRN (WRN) gene, complete cds
3647	16250		2.62	7.7E-02	AJ238093.1	NT	Homo sapiens partial AF-4 gene, exons 2 to 7 and Alu repeat elements
5129	17701	30135	0.92	7.7E-02	AL161501.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 13
7850	20392	33285	5.56	7.7E-02	AA402949.1	EST_HUMAN	zu53d11.r1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:741717 5' similar to TR:G1173905 G1173905 SPLICEOSOME ASSOCIATED PROTEIN. ;
9749	22247	35229	5.97	7.7E-02	P38080	SWISSPROT	PROBABLE SERINE/THREONINE-PROTEIN KINASE YBR059C

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10037	22532	35527	0.75	7.7E-02	A1318662.1	EST_HUMAN	ta80b08.x1 NCI_CGAP_HSC2 Homo sapiens cDNA clone IMAGE:2050359 3' similar to gb:Z26878 60S
10037	22532	35528	0.75	7.7E-02	A1318662.1	EST_HUMAN	RIBOSOMAL PROTEIN L38 (HUMAN);
10889	23410	36428	4.97	7.7E-02	11422757	NT	ta80b08.x1 NCI_CGAP_HSC2 Homo sapiens cDNA clone IMAGE:2050359 3' similar to gb:Z26878 60S
12194	24984		1.91	7.7E-02	11436859	NT	RIBOSOMAL PROTEIN L38 (HUMAN);
3434	16042	28523	3.08	7.6E-02	BE514432.1	EST_HUMAN	Homo sapiens KIAA0628 gene product (KIAA0628), mRNA
3455	16062	28537	0.67	7.6E-02	AA296447.1	EST_HUMAN	Homo sapiens interferon regulatory factor 7 (IRF7), mRNA
3615	16218	28697	0.67	7.6E-02	AJ400877.1	NT	601316428F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3834903 5'
4993	17567		2.04	7.6E-02	AW858844.1	EST_HUMAN	EST112214 Cerebellum II Homo sapiens cDNA 5' end similar to similar to protocadherin 43
6247	18856	31627	0.7	7.6E-02	A061275.1	EST_HUMAN	Homo sapiens ASCL3 gene, OEGP1 gene, C11orf14 gene, C11orf15 gene, C11orf16 gene and C11orf17 gene
6497	19098	31882	0.83	7.6E-02	BE379326.1	EST_HUMAN	RC3-CT0347-110300-014-405 CT0347 Homo sapiens cDNA
9292	21892	34839	1.24	7.6E-02	AJ131016.1	NT	an2502.x1 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:1698730 3'
9811	22309		1.7	7.6E-02	AL139078.2	NT	601236402F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3608401 5'
10120	22615	35605	0.52	7.6E-02	BE708002.1	EST_HUMAN	Homo sapiens SCL gene locus
10251	22746		0.49	7.6E-02	BE959838.2	EST_HUMAN	Campylobacter jejuni NCTC111168 complete genome; segment 5/6
10480	22974	35981	0.72	7.6E-02	X92656.1	NT	RC1-HT0545-020800-017-406 HT0545 Homo sapiens cDNA
10480	22974	35982	0.72	7.6E-02	X92656.1	NT	601654915R1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3839810 3'
11526	23974	37044	2.58	7.6E-02	AW896845.1	EST_HUMAN	L. esculentum mRNA for triose phosphate translocator
817	13435	25940	1.18	7.5E-02	5902093	NT	L. esculentum mRNA for triose phosphate translocator
817	13435	25941	1.18	7.5E-02	5902093	NT	QV3-BN0046-150400-151-404 BN0046 Homo sapiens cDNA
4606	17189	29636	0.57	7.5E-02	AB015961.1	NT	Homo sapiens solute carrier family 9 (neurotransmitter transporter, glycine), member 9 (SLC6A9), mRNA
8280	20821	33740	1.15	7.5E-02	A894367.1	EST_HUMAN	Homo sapiens solute carrier family 9 (neurotransmitter transporter, glycine), member 9 (SLC6A9), mRNA
8444	20984	33899	1.18	7.5E-02	AU116913.1	EST_HUMAN	Homo sapiens IL-18 gene for Interleukin-18, intron 1 and exon 2
8945	22440		0.5	7.5E-02	BF221730.1	EST_HUMAN	wf52b02.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2428491 3' similar to gb:M14328 ALPHA
10387	22881	35875	0.9	7.5E-02	BF208609.1	EST_HUMAN	ENOLASE (HUMAN);
10481	22975	35983	0.71	7.5E-02	X79460.1	NT	AU116913 HEMBA1 Homo sapiens cDNA clone HEMBA1000284 5'
503	13135	25623	1.23	7.4E-02	AW838547.1	EST_HUMAN	7a61c05.x1 NCI_CGAP_P128 Homo sapiens cDNA clone IMAGE:3578504 3' similar to contains element
1509	14101		0.97	7.4E-02	AF030027.1	NT	MER27 repetitive element;
							601870205F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4100449 5'
							C.fiml DSM 20113 16S rDNA
							RC5-LT0054-260100-011-H08 LT0054 Homo sapiens cDNA
							Equine herpesvirus 4 strain NS60567, complete genome

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2616	15178		1.04	7.4E-02	6755069	NT	Mus musculus paired-like homeodomain transcription factor 1 (Pbx1), mRNA
3654	16257	28729	0.84	7.4E-02	A1807885.1	EST_HUMAN	wf43h01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2358385 3'
4814	17392	29844	1.33	7.4E-02	L79810.1	NT	Homo sapiens ADP/ATP carrier protein (ANT-2) gene, complete cds
4911	17486	29942	2.82	7.4E-02	6978442	NT	Rattus norvegicus Actin receptor like kinase 1 (Acvrl), mRNA
5052	17625		1.65	7.4E-02	AE000886.1	NT	Methanobacterium thermoautotrophicum from bases 1076134 to 1086763 (section 92 of 148) of the complete genome
5076	17649	30090	1.67	7.4E-02	6678492	NT	Mus musculus ubiquitin c-terminal hydrolase related polypeptide (Uchrlp), mRNA
5393	17851	30364	0.93	7.4E-02	AJ012469.1	NT	Caenorhabditis elegans mRNA for DYS-1 protein, partial
6621	19218		1.64	7.4E-02	R17477.1	EST_HUMAN	wf14g06.t1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:32339 5'
7485	20008	32874	0.68	7.4E-02	AA605132.1	EST_HUMAN	no71d02.s1 NCI CGAP_A11 Homo sapiens cDNA clone IMAGE:1112259 3'
7842	20384	33288	1.23	7.4E-02	BE880112.1	EST_HUMAN	601493366F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3895264 5'
8438	20978	33893	1.2	7.4E-02	U56089.1	NT	Human periodic tryptophan protein 2 (PWP2) gene, exons 15 to 21, and complete cds
9093	21628	34566	0.92	7.4E-02	AW629605.1	EST_HUMAN	hh67d11.y1 NCI CGAP_GU1 Homo sapiens cDNA clone IMAGE:2967861 5' similar to SW:SCA2_HUMAN O15127 SECRETORY CARRIER-ASSOCIATED MEMBRANE PROTEIN 2. ;
9093	21629	34567	0.92	7.4E-02	AW629605.1	EST_HUMAN	hh67d11.y1 NCI CGAP_GU1 Homo sapiens cDNA clone IMAGE:2967861 5' similar to SW:SCA2_HUMAN
9360	20299	33197	0.72	7.4E-02	A1672939.1	EST_HUMAN	O15127 SECRETORY CARRIER-ASSOCIATED MEMBRANE PROTEIN 2. ;
9360	20299	33198	0.72	7.4E-02	A1672939.1	EST_HUMAN	we74d02.x1 Soares_Dieckgraebe_colon_NHGD Homo sapiens cDNA clone IMAGE:2346819 3'
9728	22226	35203	0.85	7.4E-02	U62293.1	NT	we74d02.x1 Soares_Dieckgraebe_colon_NHGD Homo sapiens cDNA clone IMAGE:2346819 3'
11600	24043		1.57	7.4E-02	U89282.1	NT	Human LIM-kinase1 and alternatively spliced LIM-kinase1 (LIMK1) gene, complete cds
11912	24250		1.29	7.4E-02	11525893	NT	Rattus norvegicus telomerase protein component 1 (TLP1) mRNA, complete cds
12187	25015		4.44	7.4E-02	AW379431.1	EST_HUMAN	Homo sapiens histone deacetylase 5 (NY-CO-9), mRNA
12351	24531	30926	2.8	7.4E-02	BF035099.1	EST_HUMAN	CM4-HT0243-081199-037-411 HT0243 Homo sapiens cDNA
12361	24535	30901	1.37	7.4E-02	AJ223459.2	NT	601453813F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3857738 5'
494	13127	25613	1.42	7.3E-02	BE964961.2	EST_HUMAN	Aspergillus nidulans prnD, prnX, prnA genes
494	13127	25614	1.42	7.3E-02	BE964961.2	EST_HUMAN	601658738R1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3886209 3'
713	13334	25820	2.68	7.3E-02	AE001789.1	NT	601658738R1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3886209 3'
1528	15444	26659	4.47	7.3E-02	AW900281.1	EST_HUMAN	Thermotoga maritima section 101 of 136 of the complete genome
1885	15453		16.16	7.3E-02	AL163302.2	NT	CM0-NN1004-130300-284-g08 NN1004 Homo sapiens cDNA
						NT	Homo sapiens chromosome 21 segment HS21C102
							Human germline T-cell receptor beta chain Dopamine-beta-hydroxylase-like, TRY1, TRY2, TRY3, TCRBV27S1P, TCRBV22S1A2N1T, TCRBV9S1A1T, TCRBV7S1A1N2T, TCRBV5S1A1T, TCRBV13S3, TCRBV6S7P, TCRBV7S3A2T, TCRBV13S2A1T, TCRBV9S2A2PT, TCRBV7S2A1N4T, TCRBV13S9/13S>
3838	16437		0.59	7.3E-02	U66059.1	NT	Mus musculus transcription factor USF2 (USF2) gene, exons 8-10 and complete cds
5137	17709		1.11	7.3E-02	U12283.1	NT	

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6580	19178	31978	1.56	7.3E-02	AA779977.1	EST_HUMAN	z24602.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:451178 3' similar to gbL02426 26S PROTEASE SUBUNIT 4 (HUMAN);
7484	20007	32872	4.36	7.3E-02	P05143	SWISSPROT	PROLINE-RICH PROTEIN MP-3
7484	20007	32873	4.36	7.3E-02	P05143	SWISSPROT	PROLINE-RICH PROTEIN MP-3
8109	20650		1.06	7.3E-02	7682107	NT	Homo sapiens KIAA0424 protein (KIAA0424), mRNA
8137	21672		1.38	7.3E-02	AB011090.1	NT	Homo sapiens mRNA for KIAA0518 protein, partial cds
11095	19178	31978	3.07	7.3E-02	AA779977.1	EST_HUMAN	z24602.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:451178 3' similar to gbL02426 26S PROTEASE SUBUNIT 4 (HUMAN);
125	12784	25278	1.36	7.2E-02	AE000892.1	NT	Methanobacterium thermoautotrophicum from bases 1029155 to 1039934 (section 88 of 148) of the complete genome
125	12784	25280	1.36	7.2E-02	AE000892.1	NT	Methanobacterium thermoautotrophicum from bases 1029155 to 1039934 (section 88 of 148) of the complete genome
1524	14118	26652	2.11	7.2E-02	AL163301.2	NT	Homo sapiens chromosome 21 segment HS21C101
1524	14118	26653	2.11	7.2E-02	AL163301.2	NT	Homo sapiens chromosome 21 segment HS21C101
2585	15148		2.76	7.2E-02	U14784.1	NT	Human immunodeficiency virus type 1 isolate 28 reverse transcriptase (pol) gene, internal fragment, partial cds
3954	16552	28021	0.59	7.2E-02	AW289322.1	EST_HUMAN	UI-H-BW0-gj-a-05-Q-U1.s1 NCI_CGAP_Sub6 Homo sapiens cDNA clone IMAGE:2732049 3'
4438	17024	29464	3.65	7.2E-02	BF572307.1	EST_HUMAN	602077757F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:4251950 5'
5223	17788	30207	0.89	7.2E-02	AB001562.1	NT	Streptococcus mutans gene for glucose-1-phosphate uridylyltransferase, complete cds
5491	18125	30533	2.8	7.2E-02	U67531.1	NT	Methanococcus jannaschii section 73 of 150 of the complete genome
5492	18126	30534	8.6	7.2E-02	P11120	SWISSPROT	CALMODULIN
6265	18973		0.83	7.2E-02	BF217596.1	EST_HUMAN	601883905F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4086224 5'
7220	19751	32607	1.27	7.2E-02	BF216096.1	EST_HUMAN	60188358F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4095710 5'
7261	19789		1.54	7.2E-02	5834897	NT	Strongylocentrotus purpuratus mitochondrion, complete genome
8128	20669	33578	0.69	7.2E-02	P05143	SWISSPROT	PROLINE-RICH PROTEIN MP-3
8128	20669	33578	0.69	7.2E-02	P05143	SWISSPROT	PROLINE-RICH PROTEIN MP-3
8984	21532		0.5	7.2E-02	Y17217.1	NT	Lactobacillus lactis cspE gene
8495	21995		0.57	7.2E-02	X16349.1	NT	Human gene for sex hormone-binding globulin (SHBG)
9529	22029	34988	2.28	7.2E-02	AV712452.1	EST_HUMAN	AV712452 DCA Homo sapiens cDNA clone DCAUG01 5'
9674	22173	35149	4.69	7.2E-02	L14561.1	NT	Homo sapiens plasma membrane calcium ATPase isoform 1 (ATP2B1) gene, alternative splice products, partial cds
9828	22326	35307	1.01	7.2E-02	BF125399.1	EST_HUMAN	601763523F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:4026436 5'
9914	22410	35386	2.73	7.2E-02	AW873187.1	EST_HUMAN	hq24f11.x1 NCI_CGAP_Adri1 Homo sapiens cDNA clone IMAGE:3120333 3' similar to TR:Q8Z340 Q8Z340 ATYPICAL PKC SPECIFIC BINDING PROTEIN. ;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10254	22749	35737	2.11	7.2E-02	U82695.2	NT	Homo sapiens zinc finger protein 92 (ZFP92), expressed-Xq28STS protein (XQ28ORF), and biglycan (BGN) genes, complete cds; and plasma membrane calcium ATPase isoform 3 (PMCA3) gene, partial cds
10370	22864	35857	5.88	7.2E-02	BE565003.1	EST_HUMAN	601343926F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3685951 5'
10392	22886		3.22	7.2E-02	BE539214.1	EST_HUMAN	601065194F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3451559 5'
10792	23315	36324	6.18	7.2E-02	AF049874.1	NT	Rattus norvegicus bHLH transcription factor Mist1 (Mist1) gene, complete cds
11822	24192	31033	1.54	7.2E-02	AA773696.1	EST_HUMAN	af81a04.r1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1048398 5'
11857	24216		4.88	7.2E-02	AJ230796.1	EST_HUMAN	AJ230796 Homo sapiens library (Seranski P) Homo sapiens cDNA clone PS13D5 3'
11914	24252		2.01	7.2E-02	AA594465.1	EST_HUMAN	no05h08.s1 NCI_CGAP_Phet1 Homo sapiens cDNA clone IMAGE:1099839 3'
11979	24290		3.59	7.2E-02	U82628.1	NT	Homo sapiens ataxia telangiectasia (ATM) gene, complete cds
11965	24858		7.52	7.2E-02	AW900962.1	EST_HUMAN	CMA4-NN1009-200300-116-c11 NN1009 Homo sapiens cDNA
12514	24633		1.85	7.2E-02	AA401779.1	EST_HUMAN	zib7c12.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:726454 5'
1948	14532	27088	1.42	7.1E-02	L02290.1	NT	Human immunodeficiency virus type 1 (D9) proviral structural capsid protein (gag) gene, partial cds
2331	14902	27473	4.53	7.1E-02	BF208802.1	EST_HUMAN	601872281F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:4092981 5'
7848	20390	33292	0.84	7.1E-02	AI125284.1	EST_HUMAN	gd92a10.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1736922 3'
11700	24113		6.04	7.1E-02	BE304764.1	EST_HUMAN	601143974F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:3051234 5'
554	13185	25663	0.97	7.0E-02	Q07092	SWISSPROT	COLLAGEN ALPHA 1(XV) CHAIN PRECURSOR
1547	14139		1.43	7.0E-02	X96677.1	NT	M.artellia Mitul-1 gene
1798	14388	26933	0.94	7.0E-02	AA056343.1	EST_HUMAN	zib6r04.s1 Stratagene colon (#837204) Homo sapiens cDNA clone IMAGE:509599 3'
3064	15680	28153	2.03	7.0E-02	AW138152.1	EST_HUMAN	UIH-B11-ecy-c-07-0-U1.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2716020 3'
3966	16564	29033	1.71	7.0E-02	AA815438.1	EST_HUMAN	ai65a12.s1 Soares_testis_NHT Homo sapiens cDNA clone 1375678 3' similar to gb:K03002 60S
4118	16712	29166	1.11	7.0E-02	BE07284.1	EST_HUMAN	RIBOSOMAL PROTEIN L32 (HUMAN);
4219	16807		1.11	7.0E-02	AW792862.1	EST_HUMAN	QV4-BT0407-280100-090-e10 BT0407 Homo sapiens cDNA
4294	16880	29327	1.28	7.0E-02	AF077821.1	NT	CMD-UM0001-060300-270-e12 UM0001 Homo sapiens cDNA
5063	17636	30079	9.56	7.0E-02	BF381987.1	EST_HUMAN	Canis familiaris inducible nitric oxide synthase mRNA, complete cds
5590	18211		0.84	7.0E-02	Y08143.2	NT	601816291F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:4050071 5'
7431	19655	32820	0.88	7.0E-02	AV689285.1	EST_HUMAN	Lumbricus rubellus mRNA for cyclophilin B
9027	21564	34493	1.41	7.0E-02	9628113	NT	AV689285 GKC Homo sapiens cDNA clone GKCCAE06 5'
9515	22015	34973	1.25	7.0E-02	K02901.1	NT	African swine fever virus, complete genome
9863	22360	35340	0.73	7.0E-02	U27266.1	NT	Rat Ig germline epsilon H-chain gene C-region, 3' end
11251	23781	36837	2.68	7.0E-02	AA724295.1	EST_HUMAN	Human myosin binding protein H (MyBP-H) gene, complete cds ah98a05.s1 Soares_NFL_I_GBC_S1 Homo sapiens cDNA clone IMAGE:1327184 3' similar to gb:L14837 TIGHT JUNCTION PROTEIN ZO-1 (HUMAN);

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
540	13171	25649	11.84	6.9E-02	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
540	13171	25650	11.84	6.9E-02	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
1378	13971		1.34	6.9E-02	4507968	NT	Homo sapiens regulator of Gz-selective protein signaling (ZGAP1) mRNA, and translated products
3860	16458	28921	1.16	6.9E-02	Q06364	SWISSPROT	26S PROTEASOME REGULATORY SUBUNIT S3 (NUCLEAR ANTIGEN 21D7)
3860	16458	28922	1.16	6.9E-02	Q06364	SWISSPROT	26S PROTEASOME REGULATORY SUBUNIT S3 (NUCLEAR ANTIGEN 21D7)
							Enterococcus faecium cysteine aminopeptidase (pepC) gene, partial cds; phospho-beta-glucosidase BglB (bglB), beta-glucoside specific transport protein (bglS), transcription antiterminator (bglR), enterocin B precursor (entB), enterocin B immunity protease
5381	17840	30354	3.58	6.9E-02	AF121254.1	NT	Human calmodulin (CALM1) gene, exons 2,3,4,5 and 6, and complete cds
7988	20538		1.13	6.9E-02	U12022.1	NT	601340861F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3683030 5'
8488	21027	33944	1.1	6.9E-02	BE567435.1	EST_HUMAN	601340861F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3683030 5'
8488	21027	33945	1.1	6.9E-02	BE567435.1	EST_HUMAN	Barbarie duck parvovirus REP protein (rep) and three capsid protein VP (vp) genes, complete cds
9048	21585	34516	0.81	6.9E-02	U22967.1	NT	Xlaevis XFD2 mRNA for fork head protein
11853	24213		17.91	6.9E-02	X74315.1	NT	PROTEIN TRANSPORT PROTEIN HOFH HOMOLOG
12031	24321		1.96	6.9E-02	IP44821	SWISSPROT	Homo sapiens membrane-bound aminopeptidase P (XNPEP2) gene, complete cds
12258	24468		3.68	6.9E-02	AF195953.1	NT	ae30f02.r1 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:897339 5' similar to gb:M22382
1926	14511	27065	1.83	6.8E-02	AA496759.1	EST_HUMAN	ae30f02.r1 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:897339 5' similar to gb:M22382
1928	14511	27066	1.83	6.8E-02	AA496759.1	EST_HUMAN	MITOCHONDRIAL MATRIX PROTEIN P1 PRECURSOR (HUMAN);
1950	14534	27060	3.99	6.8E-02	AF156873.1	NT	ae30f02.r1 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:897339 5' similar to gb:M22382
2023	14605	27170	1.68	6.8E-02	BE263781.1	EST_HUMAN	Homo sapiens putative hepatic transcription factor (WBSOR14) gene, complete cds
4851	17233		0.66	6.8E-02	BE141076.1	EST_HUMAN	601194141F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3537706 5'
6980	19478		4.63	6.8E-02	BE061860.1	EST_HUMAN	MRO-HT0089-071099-001-c05 HT0089 Homo sapiens cDNA
7324	19851	32713	8.08	6.8E-02	AL163288.2	NT	RC1-BT0254-090300-017-009 BT0254 Homo sapiens cDNA
8230	20771	33690	5.36	6.8E-02	AJ248287.1	NT	Homo sapiens chromosome 21 segment HS21C068
8230	20771	33691	5.36	6.8E-02	AJ248287.1	NT	Pyrococcus abyssi complete genome; segment 5/6
11946	25064		2.48	6.8E-02	T0321.4.1	EST_HUMAN	Pyrococcus abyssi complete genome; segment 5/6
11783	24168		2.42	6.8E-02	AA758014.1	EST_HUMAN	FB4A8 Fetal brain. Stratiogene Homo sapiens cDNA clone FB4A8 3'end similar to LINE-1
12380	24547		1.37	6.8E-02	AW975839.1	EST_HUMAN	ah67005.s1 Soares_testis_NHT Homo sapiens cDNA clone 1320705 3'
12444	24580		2.87	6.8E-02	9910585	NT	EST387848 MAGE resequences, MAGN Homo sapiens cDNA
12650	25008	30614	1.54	6.8E-02	6978885	NT	Mus musculus latent TGF beta binding protein (Tgfb), mRNA
1578	14169		1.51	6.7E-02	AF115536.1	NT	Rattus norvegicus Growth factor independent-1 (Gfi1), mRNA
1938	14522	27078	3.82	6.7E-02	AJ220285.1	EST_HUMAN	Oncorhynchus mykiss TAP1 protein (OmyTAP1) mRNA, OmyTAP1'01 allele, complete cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3780	16380	28844	4.61	6.7E-02	P17278	SWISSPROT	HOMEOBOX PROTEIN HOX-D4 (CHOXA)
4842	17420	29873	3.51	6.7E-02	AF001514.1	NT	Bacillus halodurans genomic DNA, section 8/14
7792	20335	33241	0.63	6.7E-02	X62695.1	NT	H sapiens DNA for cGMP phosphodiesterase (exons 4-22)
7792	20335	33242	0.63	6.7E-02	X62695.1	NT	H sapiens DNA for cGMP phosphodiesterase (exons 4-22)
9518	22018	34975	0.75	6.7E-02	AW137359.1	EST_HUMAN	UI-H-B11-acr-g-01-Q-UI.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2715433 3'
9518	22018	34976	0.75	6.7E-02	AW137359.1	EST_HUMAN	UI-H-B11-acr-g-01-Q-UI.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2715433 3'
2225	14800	27372	3	6.6E-02	AJ289241.1	EST_HUMAN	Mus musculus Capn12 gene for calpain 12, exons 1-21, three alternative transcripts
3510	16115	28594	9.7	6.6E-02	R64306.1	EST_HUMAN	Y18b10.s1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:139579 3'
3524	16129	28609	3.24	6.6E-02	7108357	NT	Homo sapiens mesothelin (MSLN), transcript variant 1, mRNA
3524	16129	28610	3.24	6.6E-02	7108357	NT	Homo sapiens mesothelin (MSLN), transcript variant 1, mRNA
4154	16746	29200	1.83	6.6E-02	AF260225.1	NT	Homo sapiens TESTIN 2 and TESTIN 3 genes, complete cds, alternatively spliced
5114	17686	30122	11.2	6.6E-02	Q61703	SWISSPROT	INTER-ALPHA-TRYPsin INHIBITOR HEAVY CHAIN H2 PRECURSOR (ITI HEAVY CHAIN H2)
5114	17686	30123	11.2	6.6E-02	Q61703	SWISSPROT	INTER-ALPHA-TRYPsin INHIBITOR HEAVY CHAIN H2 PRECURSOR (ITI HEAVY CHAIN H2)
5164	17733	30160	0.57	6.6E-02	AA393244.1	EST_HUMAN	Z74407.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:728052 5' similar to gb:L04270 TUMOR NECROSIS FACTOR RECEPTOR 2 RELATED PROTEIN PRECURSOR (HUMAN);
5164	17733	30161	0.57	6.6E-02	AA393244.1	EST_HUMAN	Z74407.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:728052 5' similar to gb:L04270 TUMOR NECROSIS FACTOR RECEPTOR 2 RELATED PROTEIN PRECURSOR (HUMAN);
6698	19294	32099	4.11	6.6E-02	X08411.1	NT	P. vulgans mRNA for chalcone synthase
7888	20430	33339	1.58	6.6E-02	AF052572.1	NT	Homo sapiens chemokine receptor CXCR4 gene, promoter region and complete cds
8409	20949	33869	0.72	6.6E-02	AF006055.1	NT	Dictyostelium discoideum dalin (darA) gene, complete cds
8714	21253		0.49	6.6E-02	O60673	SWISSPROT	DNA POLYMERASE ZETA CATALYTIC SUBUNIT (HREV3)
8852	21391	34312	0.52	6.6E-02	9629198	NT	Human respiratory syncytial virus, complete genome
8852	21391	34313	0.52	6.6E-02	9629198	NT	Human respiratory syncytial virus, complete genome
9862	22359	35339	0.58	6.6E-02	AI458752.1	EST_HUMAN	U97606.k1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2149498 3'
9999	22494	35483	1.54	6.6E-02	Y07848.1	NT	Homo sapiens EWS, gar22, rrp22 and bam22 genes
10029	22524		0.53	6.6E-02	11430559	NT	Homo sapiens vinculin (VCL), mRNA
10842	23363	36379	7.09	6.6E-02	BF374248.1	EST_HUMAN	MR1-SN0064-010600-006-a12 SN0064 Homo sapiens cDNA
12251	24462		2.87	6.6E-02	8637991	NT	Mus musculus DIPB gene (Dipb), mRNA
12585	24678		1.36	6.6E-02	AF167430.1	NT	Rattus norvegicus cytochrome P450 2E1 (CYP2E1) gene, 5' flanking region
608	13236	25710	1.65	6.6E-02	BF027639.1	EST_HUMAN	601671046F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3954178 5'
1024	13635	26151	2.61	6.6E-02	7706068	NT	Homo sapiens E2F-like protein (LOC51270), mRNA
1435	14028	26556	3.4	6.5E-02	U47624.1	NT	Xenopus laevis alpha(E)-catenin mRNA, complete cds
1770	14360	26905	1.42	6.5E-02	AE000764.1	NT	Aquifex aeolicus section 96 of 109 of the complete genome
5349	17909	30324	0.88	6.5E-02	D45899.1	NT	Ceanorhabditis elegans DNA for ryanodine receptor, complete cds



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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5747	18373	31081	1.79	6.5E-02	AA443991.1	EST_HUMAN	zv48h12.s1 Soares ovary tumor NHOT Homo sapiens cDNA clone IMAGE:756743 3' similar to gb:M26038
6664	19260	32064	0.89	6.5E-02	BF695340.1	EST_HUMAN	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DR-5 BETA CHAIN (HUMAN);
7051	18070	30461	0.96	6.5E-02	U22861.1	NT	Azotobacter vinelandii ATCC 9046 negative regulatory MucB (mucB) gene, partial cds
9854	22352	35332	0.65	6.5E-02	BE963200.2	EST_HUMAN	601656817R1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3865637 3'
9854	22352	35333	0.65	6.5E-02	BE963200.2	EST_HUMAN	601656817R1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3865637 3'
10363	22857	35849	0.59	6.5E-02	BF106300.1	EST_HUMAN	601823511F1 NIH_MGC_77 Homo sapiens cDNA clone IMAGE:4043138 5'
10518	23056	36067	5.86	6.5E-02	AA195848.1	EST_HUMAN	z32g05.s1 Soares NIHMPU_S1 Homo sapiens cDNA clone IMAGE:665144 3'
11669	24091		5.28	6.5E-02	M21496.1	NT	Rabbit microsomal epoxide hydrolase
12040	24327		3.84	6.5E-02	AF102993.1	NT	Nectria haematococca kinesin related protein 2 (KRP2) gene, complete cds
601	13230	25703	1.74	6.4E-02	X94549.1	NT	A. cartae precursor of peridinin-chlorophyll-protein (PCP) gene
5841	18270	30743	1.21	6.4E-02	A191956.1	EST_HUMAN	q67b01.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1738249 3' similar to contains LTR8.b3
6261	18869	31639	5.4	6.4E-02	AF052733.1	NT	LTR8 repetitive element;
6261	18869	31640	5.4	6.4E-02	AF052733.1	NT	Heterodera glycines beta-1,4-endoglucanase-1 precursor (HG-eng-1) gene, complete cds
6534	19134	31927	0.88	6.4E-02	A1672896.1	EST_HUMAN	Heterodera glycines beta-1,4-endoglucanase-1 precursor (HG-eng-1) gene, complete cds
6907	19841	32477	4.7	6.4E-02	BE974448.1	EST_HUMAN	we73g12.x1 Soares_Dieckgraebe_colon_NHCD Homo sapiens cDNA clone IMAGE:2348780 3'
8278	20819		2.66	6.4E-02	6753323	NT	601680425R2 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:3950503 3'
8599	21138	34052	3.59	6.4E-02	AA093305.1	EST_HUMAN	Mus musculus chaperonin subunit 6a (zeta) (Cct6a), mRNA
9055	21592	34522	0.85	6.4E-02	AF150195.1	EST_HUMAN	K1419.seq.F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA 5'
9508	22008		0.81	6.4E-02	BE834083.1	EST_HUMAN	AF150195 Human mRNA from cd34+ stem cells Homo sapiens cDNA clone CBDA1A10
9833	22133	35098	1.79	6.4E-02	AB011126.1	NT	RC1-OT0083-150600-014-g06 OT0083 Homo sapiens cDNA
10162	22857	35652	0.88	6.4E-02	AF087150.1	NT	Homo sapiens mRNA for KIAA0554 protein, partial cds
10162	22857	35653	0.68	6.4E-02	AF087150.1	NT	Homo sapiens DNA topoisomerase II beta (TOP2B) gene, exons 16, 17, and 18
							Homo sapiens DNA topoisomerase II beta (TOP2B) gene, exons 16, 17, and 18
11554	24002	37074	2.05	6.4E-02	U91328.1	NT	Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (HLA-H) gene, RefSeq gene, and sodium phosphate transporter (NPT3) gene, complete cds
11554	24002	37075	2.05	6.4E-02	U91328.1	NT	Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (HLA-H) gene, RefSeq gene, and sodium phosphate transporter (NPT3) gene, complete cds
11931	24871		4.88	6.4E-02	AF107890.1	NT	Homo sapiens mucin 5B (MUC5B) gene, partial cds
11966	24286	30983	2.86	6.4E-02	AJ277174.1	NT	Drosophila melanogaster mRNA for mod(mdg4)51.4 protein

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1791	14381	26926	3.03	6.3E-02	AF109905.1	NT	Mus musculus major histocompatibility locus class III regions Hsc70t gene, partial cds; smRNP, G7A, NG23, Mufs homolog, CLCP, NG24, NG25, and NG28 genes, complete cds; and unknown genes
3664	16296		2.41	6.3E-02	P37092	SWISSPROT	HEAT SHOCK PROTEIN 70 HOMOLOG
6285	18893	31682	1.1	6.3E-02	BF210736.1	EST_HUMAN	601873316F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4097499 5'
7291	19819		1.05	6.3E-02	X97869.1	NT	H.sapiens gene encoding La autoantigen
9215	21732	34675	0.96	6.3E-02	AJ243916.1	NT	Drosophila melanogaster Dominica gene, exons 1-3
9927	22423	35397	2.86	6.3E-02	AB010162.1	NT	Hepatitis G virus RNA for polyprotein (NS5A region), partial cds, strain: CMR-152
10172	22867		0.87	6.3E-02	AV698070.1	EST_HUMAN	AV698070 GK Homo sapiens cDNA clone GKCAHE01 5'
10594	18893	31662	3.6	6.3E-02	BF210736.1	EST_HUMAN	601873316F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4097499 5'
4337	16924	29365	3.3	6.2E-02	AL161572.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 88
4431	17017		1.04	6.2E-02	AF271235.1	NT	Rattus norvegicus differentiation-associated Na-dependent inorganic phosphate cotransporter (DNPI) mRNA, complete cds
4692	17284		6.75	6.2E-02	Q62191	SWISSPROT	52 KD RO PROTEIN (SIOGREN SYNDROME TYPE A ANTIGEN (SS-A)) (RO(SS-A)) (RO52)
6889	19624	32459	0.75	6.2E-02	D49530.1	NT	Spirulina platensis DNA for adenylate cyclase, complete cds
7623	20136	33014	0.78	6.2E-02	U41453.1	NT	Rattus norvegicus PKC binding protein and substrate mRNA, complete cds
8877	25123	34742	0.51	6.2E-02	M61101.1	NT	Porcine group C rotavirus (strain Cowden) outer membrane protein (VP7) mRNA, complete cds
9287	21793	34742	0.5	6.2E-02	AA778450.1	EST_HUMAN	af20a06 s1 Soares, total, fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:1032178 3'
9401	21910	34859	1.05	6.2E-02	6677898	NT	Mus musculus stromal cell derived factor receptor 2 (Sdfr2), mRNA
11027	23541	36576	1.74	6.2E-02	AF217490.1	NT	Homo sapiens fragile 16D oxidoreductase (FOR) gene, exons 8, 9, and partial cds
11226	23757	36814	1.89	6.2E-02	AJ242735.1	NT	Metarhizium anisopliae mRNA for Chymotrypsin (chyl gene)
11770	25097		8.34	6.2E-02	AE000750.1	NT	Aquifex aeolicus section 82 of 109 of the complete genome
12200	24426	30951	3.56	6.2E-02	BF112039.1	EST_HUMAN	7137h08.x1 Soares, NSF_F8_9w_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3523815 3' similar to TR:Q9Y4S6 Q9Y4S6 HYPOTHETICAL 30.3 KD PROTEIN. [1];
2177	12934	25420	4.8	6.1E-02	D16471.1	NT	Human mRNA, Xq terminal portion
4063	16660		2.78	6.1E-02	U73325.1	NT	Arabidopsis thaliana K+ inward rectifying channel protein (AIKC1) gene, complete cds
4759	17340	29786	1.09	6.1E-02	AF119413.1	NT	Lupinus albus 1-aminocyclopropane-1-carboxylate synthase 3 (ACS3) gene, complete cds
4759	17340	29787	1.09	6.1E-02	AF119413.1	NT	Lupinus albus 1-aminocyclopropane-1-carboxylate synthase 3 (ACS3) gene, complete cds
6262	18870		1.42	6.1E-02	4507070	NT	Homo sapiens SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 3 (SMARCA3) mRNA
8207	20748	33661	3.31	6.1E-02	X99298.1	NT	H. sapiens mRNA for B-HLH DNA binding protein
8595	21134	34048	0.95	6.1E-02	BE971853.1	EST_HUMAN	601651086R1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:3934604 3'
8595	21134	34049	0.95	6.1E-02	BE971853.1	EST_HUMAN	601651086R1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:3934604 3'
10608	23142	36153	6.34	6.1E-02	BE179543.1	EST_HUMAN	IL3-H10618-110500-136-C06 HT0618 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11728	25009		23.38	6.1E-02	X70969.1	NT	S-japonicum mRNA for serine-enzyme
12317	24880		1.39	6.1E-02	AI886611.1	EST_HUMAN	ts29107.x1 NCI CGAP_OV35 Homo sapiens cDNA clone IMAGE:2292801 3'
12484	24592		7.98	6.1E-02	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
1305	13899	28419	1.01	6.0E-02	AE001777.1	NT	Thermoloba maritima section 89 of 136 of the complete genome
2700	15257	27825	1.15	6.0E-02	AW668848.1	EST_HUMAN	EST380924 IMAGE resequences, MAGJ Homo sapiens cDNA
2801	15353		1.58	6.0E-02	AB031289.1	NT	Mesocostoides cordi mitochondrial DNA, NADH dehydrogenase subunit 4, tRNA-Gln, tRNA-Phe, tRNA-Met, ATPase subunit 6, and NADH dehydrogenase subunit 2
2863	12777	25259	1.09	6.0E-02	AA188730.1	EST_HUMAN	zp78c04.r1 Stratagene HeLa cell s3 937216 Homo sapiens cDNA clone IMAGE:826310 5'
2863	12777	25260	1.09	6.0E-02	AA188730.1	EST_HUMAN	zp78c04.r1 Stratagene HeLa cell s3 937216 Homo sapiens cDNA clone IMAGE:826310 5'
3266	15878	28360	1.24	6.0E-02	AA372376.1	EST_HUMAN	EST84268 Colon adenocarcinoma IV Homo sapiens cDNA 5' end similar to tissue-specific protein
3268	15878	28361	1.24	6.0E-02	AA372376.1	EST_HUMAN	EST84268 Colon adenocarcinoma IV Homo sapiens cDNA 5' end similar to tissue-specific protein
3697	18298		1.01	6.0E-02	BE96443.2	EST_HUMAN	601658150R1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3876060 3'
5104	17676	30116	0.95	6.0E-02	Z67739.2	NT	Streptococcus pneumoniae perC, perE and transposase genes and ORF DNA
5595	18225		1.69	6.0E-02	AW370211.1	EST_HUMAN	RC3-BT0253-011199-013-b04 BT0253 Homo sapiens cDNA
6384	18968	31746	1.43	6.0E-02	AI807537.1	EST_HUMAN	wf48h05.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2358873 3' similar to contains L1.11 L1 L1 repetitive element;
7063	18082	30438	2.73	6.0E-02	5174698	NT	Homo sapiens stimulated trans-acting factor (50 kDa) (STAF50) mRNA
7063	18082	30439	2.73	6.0E-02	5174698	NT	Homo sapiens stimulated trans-acting factor (50 kDa) (STAF50) mRNA
7239	19768	32624	2.17	6.0E-02	BF382349.1	EST_HUMAN	601815274F2 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4049226 5'
7672	20184	33072	1.94	6.0E-02	AI204275.1	EST_HUMAN	qf58b08.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1754199 3'
8361	20901		0.57	6.0E-02	11466495	NT	Reclinomonas americana mitochondrion, complete genome
9186	21713	34656	1.12	6.0E-02	AI623167.1	EST_HUMAN	ts78a08.x1 NCI CGAP_GC6 Homo sapiens cDNA clone IMAGE:2237362 3'
9196	21713	34657	1.12	6.0E-02	AI623167.1	EST_HUMAN	ts78a08.x1 NCI CGAP_GC6 Homo sapiens cDNA clone IMAGE:2237362 3'
9327	21841	34792	2	6.0E-02	AJ245365.1	NT	Acipenser baeri partial IGLV gene for immunoglobulin light chain variable region, exons 1-2
9327	21841	34793	2	6.0E-02	AJ245365.1	NT	Acipenser baeri partial IGLV gene for immunoglobulin light chain variable region, exons 1-2
9819	22317	35299	0.51	6.0E-02	AA309797.1	EST_HUMAN	EST180654 Jurkat T-cells V Homo sapiens cDNA 5' end similar to similar to heat shock protein 1, 60 kDa-like
9819	22317	35300	0.51	6.0E-02	AA309797.1	EST_HUMAN	EST180654 Jurkat T-cells V Homo sapiens cDNA 5' end similar to similar to heat shock protein 1, 60 kDa-like
11214	23717		2.13	6.0E-02	AA128386.1	EST_HUMAN	zn87c08.r1 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:565166 5' similar to gb:X69181.80S RIBOSOMAL PROTEIN L31 (HUMAN);
11985	24295	30982	1.43	6.0E-02	11431702	NT	Homo sapiens DNA-dependent protein kinase catalytic subunit-interacting protein 2 (KIP2), mRNA
12394	24554		6.04	6.0E-02	AI809273.1	EST_HUMAN	wf69h03.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2360885 3' similar to TR:O60298 O60298 KIAA0551 PROTEIN;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
250	12910	25393	4.76	5.9E-02	AW934719.1	EST_HUMAN	RC1-DT0001:290100-012-010 DT0001 Homo sapiens cDNA
3012	15628	28107	2.75	5.9E-02	AF190289.1	NT	Mus musculus p53 tumor suppressor gene, exon 10 and 11, partial cds; alternatively spliced
4768	17349	29799	0.97	5.9E-02	AL161535.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 35
4768	17349	29800	0.97	5.9E-02	AL161535.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 35
4852	17430		0.6	5.9E-02	AF166111.1	NT	Duck parvovirus strain 90-2183 capsid protein (VP3) gene, partial cds
4896	17570	30014	0.96	5.9E-02	AF006304.1	NT	Saccharomyces cerevisiae protein tyrosine phosphatase (PTP3) gene, complete cds
6973	24774	32374	0.67	5.9E-02	AF145880.1	NT	Drosophila melanogaster LD23107 sting (sting) mRNA, complete cds
8552	21091	34011	1.99	5.9E-02	9055249	NT	Mus musculus inroquois related homeobox 5 (Drosophila) (Irx5), mRNA
9372	20311		0.82	5.9E-02	BF242748.1	EST_HUMAN	601877609F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4105894 5'
10684	23196		3.41	5.9E-02	6679870	NT	Mus musculus follistatin-like (Fstl), mRNA
10899	23419	36436	2.35	5.9E-02	11433356	NT	Homo sapiens ninein (LOC51199), mRNA
11429	23880		1.83	5.9E-02	AJ240733.1	NT	Gallus gallus HKC9 telomere junction
968	13579		5.2	5.8E-02	D90110.1	NT	Thiobacillus ferrooxidans merC, merA genes and URF-1
1700	14293	26828	1	5.8E-02	Q61768	SWISSPROT	KINESIN HEAVY CHAIN (UBIQUITOUS KINESIN HEAVY CHAIN) (UKHC)
2886	15504		0.98	5.8E-02	AJ223621.1	NT	Populus trichocarpa CCoAOMT1 gene, exon 1 to exon 5
3725	16326	28783	1.35	5.8E-02	AE001775.1	NT	Thermotoga maritima section 87 of 136 of the complete genome
4446	17032	29473	5.29	5.8E-02	AW051927.1	EST_HUMAN	w24c02.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2544578 3'
4446	17032	29474	5.29	5.8E-02	AW051927.1	EST_HUMAN	w24c02.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2544578 3'
4645	17227	29682	5.04	5.8E-02	AJ247505.1	EST_HUMAN	qh56f01.x1 Soares_fetal_liver_spleen_1NPLS_S1 Homo sapiens cDNA clone IMAGE:1848697 3' similar to gb:M13142 COAGULATION FACTOR XI PRECURSOR (HUMAN);
4645	17227	29683	5.04	5.8E-02	AJ247505.1	EST_HUMAN	qh56f01.x1 Soares_fetal_liver_spleen_1NPLS_S1 Homo sapiens cDNA clone IMAGE:1848697 3' similar to gb:M13142 COAGULATION FACTOR XI PRECURSOR (HUMAN);
4674	17256		1.98	5.8E-02	AF098264.1	NT	Gallus gallus tyrosine kinase JAK1 (JAK1) mRNA, complete cds
5294	17856	30282	0.57	5.8E-02	AF275366.1	NT	Mus musculus epidermal growth factor receptor (Egfr) gene, exons 5 through 28, and complete cds, alternatively spliced
5294	17856	30283	0.57	5.8E-02	AF275366.1	NT	Mus musculus epidermal growth factor receptor (Egfr) gene, exons 5 through 28, and complete cds, alternatively spliced
6068	18685	31428	1.52	5.8E-02	AA190984.1	EST_HUMAN	zp86a11.s1 Stratagene HeLa cell s3 937216 Homo sapiens cDNA clone IMAGE:627068 3'
7670	20182	33069	2.73	5.8E-02	M99150.1	NT	Human polymorphic microsatellite DNA
7670	20182	33070	2.73	5.8E-02	M99150.1	NT	Human polymorphic microsatellite DNA
8601	21140	34054	0.76	5.8E-02	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
11871	24223		2.86	5.8E-02	AF220177.1	NT	Drosophila melanogaster male fruitless type-A (fru) mRNA, complete cds
12177	25085		8.45	5.8E-02	AA604266.1	EST_HUMAN	nc75e11.s1 NCI_CGAP_AA1 Homo sapiens cDNA clone IMAGE:1112684 3'

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3083	15708	28178	1.13	5.7E-02	A0181644.1	EST_HUMAN	ou63b05.s1 NCI_CGAP_Bi2 Homo sapiens cDNA clone IMAGE:1632465 3' similar to WP:C37A2.2
3107	15722	28183	1.8	5.7E-02	AF118117.1	NT	CE08611
3769	16370		0.96	5.7E-02	AF001292.1	NT	Homo sapiens dopamine transporter (SLC6A3) gene, complete cds
3871	16469	28932	2.44	5.7E-02	AW968791.1	NT	Chironomus thummi thummi globin VIIA.1 (cit-7A.1), globin 9.1 (cit-8.1), globin II-beta (cit-2beta), non-functional globin XIII (cit-13RT), globin XII (cit-12) and globin XI (cit-11) genes, complete cds
4765	17373		1.06	5.7E-02	M95099.1	NT	EST378865 IMAGE resequences, MAGI Homo sapiens cDNA
5334	17895	30310	0.89	5.7E-02	AJ251973.1	NT	Bos taurus lysozyme gene (cow 3), complete cds
6039	18658		0.8	5.7E-02	AF275948.1	NT	Homo sapiens partial steerin-1 gene
8086	20837	33548	1.46	5.7E-02	AJ296080.1	NT	Homo sapiens ABCA1 (ABCA1) gene, complete cds
8764	22282	35245	0.65	5.7E-02	6681260	NT	Rattus norvegicus mRNA for potassium channel, alpha subunit (Kv9.2 gene)
11067	23578	36617	4.17	5.7E-02	A1752885.1	EST_HUMAN	Mus musculus ecd2 oncogene (Ecd2), mRNA
11067	23579	36618	4.17	5.7E-02	A1752885.1	EST_HUMAN	cn18b09.y1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBC_cn18b09 random
11227	23758		1.56	5.7E-02	AL163303.2	NT	cn18b09.y1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBC_cn18b09 random
12085	24891		12.96	5.7E-02	D50320.1	NT	Homo sapiens chromosome 21 segment HS21C103
12257	24487		1.71	5.7E-02	AJ271735.1	NT	Pig DNA for SPAI-2, complete cds
12334	24965		3.31	5.7E-02	AF217490.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
12483	25074		8.94	5.7E-02	AF261280.1	NT	Homo sapiens fragile 16D oxidoreductase (FOR) gene, exons 8, 9, and partial cds
12622	24700	30863	1.58	5.7E-02	R48513.1	EST_HUMAN	Pan troglodytes apolipoprotein-E gene, complete cds
1574	14167	26698	1.2	5.6E-02	AF094455.1	NT	y64d10.s1 Scars breast 2NHBst Homo sapiens cDNA clone IMAGE:153523 3' similar to contains L1 repetitive element
4746	17327	28769	1.21	5.6E-02	AB013100.1	NT	Hydrocotyle reticulifolia ribosomal protein L16 (rpl16) gene, intron; chloroplast gene for chloroplast product
4806	17384	28834	1.2	5.6E-02	AA280599.1	EST_HUMAN	Lycopodium obscurum LE-ACS8 mRNA for 1-aminocyclopropane-1-carboxylate synthase, complete cds
6766	18359	32188	5.98	5.6E-02	AW172708.1	EST_HUMAN	zs45c01.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:700416 3'
6971	18548	32372	0.9	5.6E-02	AA866182.1	EST_HUMAN	x02c10.x1 NCI_CGAP_U12 Homo sapiens cDNA clone IMAGE:2856050 3' similar to TR:Q94979 Q94979 KIAA0905 PROTEIN
7205	19736	32589	3.1	5.6E-02	BE008001.1	EST_HUMAN	cd47112.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1371119 3' similar to contains Alu repetitive element; contains element L1 repetitive element
8737	21276	34188	2.2	5.6E-02	BE542663.1	EST_HUMAN	QV0-BN0147-280400-214-g07 BN0147 Homo sapiens cDNA
8737	21276	34198	2.2	5.6E-02	BE542663.1	EST_HUMAN	601067158F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3453279 5'
8737	21276	34199	2.2	5.6E-02	BE542663.1	EST_HUMAN	601067158F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3453279 5'

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9726	22224	35201	1.07	5.6E-02	AA482864.1	EST_HUMAN	m49d07.s1 NCI CGAP Alvi Homo sapiens cDNA clone IMAGE:923245 similar to TR:G769859 G769859
11439	23889		2.33	5.6E-02	AF260225.1	NT	LAMINA ASSOCIATED POLYPEPTIDE 1C.
2679	15237	27804	6.14	5.6E-02	X97869.1	NT	Homo sapiens TESTIN 2 and TESTIN 3 genes, complete cds, alternatively spliced
3251	15863	26345	3.83	5.6E-02	675550.1	NT	H. sapiens gene encoding La autoantigen
4296	16882	29328	1.12	5.6E-02	L41561.1	NT	Mus musculus SH3 domain protein 1B (Sh3d1B), mRNA
5840	18464	31188	3.19	5.6E-02	Q01174	SWISSPROT	Gallid herpesvirus mRNA fragment
6176	18464	31188	3.86	5.6E-02	Q01174	SWISSPROT	TROPOMYOSIN ALPHA CHAIN, NON MUSCLE
7412	19937	32802	1.77	5.6E-02	6755902	NT	TROPOMYOSIN ALPHA CHAIN, NON MUSCLE
8063	20605	33516	0.77	5.6E-02	AF170911.1	NT	Mus musculus tuftelin 1 (Tut1), mRNA
8063	20605	33517	0.77	5.6E-02	AF170911.1	NT	Homo sapiens sodium-dependent vitamin C transporter 1 (SVCT1) mRNA, complete cds
9573	22073	35034	0.61	5.6E-02	10947034	NT	Homo sapiens sodium-dependent vitamin C transporter 1 (SVCT1) mRNA, complete cds
9573	22073	35035	0.61	5.6E-02	10947034	NT	Homo sapiens eIF4E-transporter (4E-T), mRNA
9664	22163	35136	1.28	5.6E-02	U69492.1	NT	Homo sapiens eIF4E-transporter (4E-T), mRNA
10898	23418	36435	11.52	5.6E-02	U09771.1	NT	Mus musculus second IL11 receptor alpha chain (IL11Ra2) gene, exons 1 and 2
3054	13670		0.85	5.4E-02	AJ277468.1	NT	Citrobacter freundii DSM 30040 cyclopropane fatty acid synthase (cfa) gene, partial cds, dihydroxyacetone kinase (dhak), glycerol dehydrogenase (dhad), transcriptional activator (dhaR), 1,3-propanediol dehydrogenase (dhaT), glycerol dehydratase (dhaB), >
3469	18013		6.27	5.4E-02	BE073468.1	EST_HUMAN	Oryza sativa rbb13-1 gene for putative Bowman Birk trypsin inhibitor
3982	16580	29051	0.58	5.4E-02	U85806.1	NT	RC5-BT0559-140200-012-C03 BT0559 Homo sapiens cDNA
5119	17691	30129	2.48	5.4E-02	U53528.1	NT	Hirudo medicinalis SNAP-25 homolog mRNA, complete cds
8067	20609		1.11	5.4E-02	Z99116.1	NT	Xenopus laevis homeobox protein (Vox-1) mRNA, complete cds
9001	21538	34467	0.61	5.4E-02	AF260225.1	NT	Bacillus subtilis complete genome (section 13 of 21): from 2395261 to 2613730
10578	23113	36126	1.88	5.4E-02	U20790.1	NT	Homo sapiens TESTIN 2 and TESTIN 3 genes, complete cds, alternatively spliced
11058	23570	36606	1.56	5.4E-02	BF371289.1	EST_HUMAN	Neurospora crassa ubiquitin-cytochrome c oxidoreductase subunit VIII (QCR8) mRNA, complete cds
11058	23570	36607	1.56	5.4E-02	BF371289.1	EST_HUMAN	RC6-FN0112-180700-021-D06 FN0112 Homo sapiens cDNA
11968	24882	26205	2.9	5.4E-02	U44894.1	NT	RC6-FN0112-180700-021-D06 FN0112 Homo sapiens cDNA
1091	13696	26205	1.58	5.3E-02	AW391248.1	EST_HUMAN	Rana catesbeiana heat shock protein 30 (HSP30) mRNA, complete cds
1091	13696	26206	1.58	5.3E-02	AW391248.1	EST_HUMAN	QV0-ST0213-021289-062-a09 ST0213 Homo sapiens cDNA
1553	14145	26379	21.63	5.3E-02	T94759.1	EST_HUMAN	QV0-ST0213-021289-062-a09 ST0213 Homo sapiens cDNA
2541	15105	27677	2.71	5.3E-02	AJ276408.1	NT	ye37f12.r1 Straiagene lung (#937210) Homo sapiens cDNA clone IMAGE:119951 5' similar to gb:K01506
2969	15585	28066	0.88	5.3E-02	W58417.1	NT	HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DP(1) ALPHA CHAIN (HUMAN); Pseudomonas putida tfgS gene Drosophila melanogaster laminin B2 gene, complete cds

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2969	15585	28067	0.88	5.3E-02	M58417.1	NT	Drosophila melanogaster laminin B2 gene, complete cds
3187	15799	28271	4.52	5.3E-02	AJ276408.1	NT	Pseudomonas putida tlgS gene
5248	17811	30234	0.75	5.3E-02	AB051897.1	NT	Mus musculus Scya8, Scya9, Scya10-ps, Scya5 genes for small inducible cytokine A6 precursor, small inducible cytokine A9 precursor, Scya16 pseudogene, small inducible cytokine A5 precursor, complete cds
5250	17813	30236	8.25	5.3E-02	M80463.1	NT	Mus musculus caudal type homeobox-1 (Cdx-1) gene, complete cds
5522	18154	30568	1.97	5.3E-02	AE000527.1	NT	Helicobacter pylori 26695 section 5 of 134 of the complete genome
5522	18154	30569	1.97	5.3E-02	AE000527.1	NT	Helicobacter pylori 26695 section 5 of 134 of the complete genome
8251	18860	31632	0.71	5.3E-02	M85289.1	NT	Human heparan sulfate proteoglycan (HSPG2) mRNA, complete cds
6964	19541	32363	4.23	5.3E-02	9695413	NT	Lymphocystis disease virus 1, complete genome
7149	19682	32523	1.55	5.3E-02	U32832.1	NT	Haemophilus influenzae Rd section 147 of 163 of the complete genome
7386	19921		2.05	5.3E-02	S78221.1	NT	nuclear protein TIF1 isoform [mice, mRNA, 4053 nt]
7818	20280	33189	0.52	5.3E-02	P38742	SWISSPROT	HYPOTHEICAL 130.0 KD PROTEIN IN SNF6-SPO11 INTERGENIC REGION
8344	20885		0.54	5.3E-02	U10098.1	NT	Mus musculus 129/Sv cystatin C (cst3) gene, complete cds
9053	21590	34521	1.83	5.3E-02	X03127.1	NT	Podospira anserina mitochondrial epsilon-sen DNA
10038	22533	35529	0.54	5.3E-02	AB022605.1	NT	Homo sapiens hCMT1b mRNA for mRNA (guanine-7, methyltransferase, complete cds)
10038	22533	35530	0.54	5.3E-02	AB022605.1	NT	Homo sapiens hCMT1b mRNA for mRNA (guanine-7, methyltransferase, complete cds)
10156	22651		0.62	5.3E-02	Y07907.1	NT	D. rerio mRNA for zp-23 POU gene, splice variant (neurula, 9-16 hpf and postmitogenesis, 20-28 hpf)
10235	22730	35721	0.65	5.3E-02	X68432.1	NT	B. reio pauli mRNA for transcription factor
2324	14895		116.52	5.2E-02	5031908	NT	Homo sapiens meprin A, alpha (PABA peptide hydrolase) (MEP1A) mRNA
3148	15762	28228	2.4	5.2E-02	AJ276881.1	NT	Homo sapiens partial LMO1 gene for LIM domain only 1 protein, exon 1
3148	15762	28229	2.4	5.2E-02	AJ276881.1	NT	Homo sapiens partial LMO1 gene for LIM domain only 1 protein, exon 1
4013	16611	29084	0.7	5.2E-02	AF236101.1	NT	Arabidopsis thaliana putative dicarboxylate diiron protein (Crd1) mRNA, complete cds
4365	16952	29392	3.61	5.2E-02	U07132.1	NT	Human steroid hormone receptor Ner-1 mRNA, complete cds
4846	17424	29877	1.29	5.2E-02	L33246.1	NT	Drosophila melanogaster filament protein homolog (sep1) gene, complete cds
6076	18693	31439	0.89	5.2E-02	U14731.1	NT	Saccharomyces cerevisiae Cdc54p (CDC54) gene, complete cds
6255	18864		1.42	5.2E-02	A1830965.1	EST_HUMAN	wj80e04.x1 NCJ CGAP_Lym12 Homo sapiens cDNA clone IMAGE:2409150 3' similar to contains MER15.b1 MER15 repetitive element
7318	18845	32706	1.19	5.2E-02	P36322	SWISSPROT	DNA POLYMERASE PROCESSIVITY FACTOR (POLYMERASE ACCESSORY PROTEIN) (PAP) (DNA-BINDING GENE 18 PROTEIN)
8136	20677		1.98	5.2E-02	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
9845	22145	35113	1.97	5.2E-02	D10927.1	NT	Turnip mosaic virus genomic RNA for Capsid protein, complete cds
9845	22145	35114	1.97	5.2E-02	D10927.1	NT	Turnip mosaic virus genomic RNA for Capsid protein, complete cds

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
12224	24445		1.84	5.2E-02	Q03030	SWISSPROT	OXALOACETATE DECARBOXYLASE ALPHA CHAIN
12327	24513		1.27	5.2E-02	D63362.1	NT	Mouse DNA for regIIgamma protein, complete cds
2402	14970		1.14	5.1E-02	AL134071.1	EST_HUMAN	DKFZp547D073_11 547 (synonym: hbr1) Homo sapiens cDNA clone DKFZp547D073 5'
4282	18868	28315	0.73	5.1E-02	AE001301.1	NT	Chlamydia trachomatis section 28 of 87 of the complete genome
4908	17483	29941	8.03	5.1E-02	AF085167.1	NT	Hordeum vulgare receptor-like kinase ARK1AS gene, partial cds
5205	17770	30193	1.14	5.1E-02	BE957423.2	EST_HUMAN	601653565R2 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:3838361 3'
6777	19369	32182	0.76	5.1E-02	AF280369.1	NT	HIV-1 patient 98 from Italy protease (pol) gene, complete cds
6942	18050	30472	1.6	5.1E-02	BF378625.1	EST_HUMAN	QV0-LJM0051-250800-350-b08 UN0051 Homo sapiens cDNA
8195	20736	33646	0.82	5.1E-02	M26434.1	NT	Human hypoxanthine phosphoribosyltransferase (HPRT) gene, complete cds
8195	20736	33647	0.82	5.1E-02	M26434.1	NT	Human hypoxanthine phosphoribosyltransferase (HPRT) gene, complete cds
8288	20829	33750	1.48	5.1E-02	AJ131966.1	NT	Spodoptera litoralis mRNA for 3-dihydroxydione 3beta-reductase
8818	21357	34282	0.63	5.1E-02	P02533	SWISSPROT	KERATIN, TYPE I CYTOSKELETAL 14 (CYTOKERATIN 14) (K14) (OK 14)
8818	21357	34283	0.63	5.1E-02	P02533	SWISSPROT	KERATIN, TYPE I CYTOSKELETAL 14 (CYTOKERATIN 14) (K14) (OK 14)
9723	22221	35196	8.16	5.1E-02	AF012898.1	NT	Candida albicans protein phosphatase Ssd1 homolog (SSD1) gene, complete cds
10084	22579	35572	1.83	5.1E-02	P40603	SWISSPROT	ANTER-SPECIFIC PROLINE-RICH PROTEIN APG (PROTEIN CEX)
10709	23237	36250	2.86	5.1E-02	AF083930.1	NT	Homo sapiens ES18 mRNA, partial cds
10709	23237	36251	2.86	5.1E-02	AF083930.1	NT	Homo sapiens ES18 mRNA, partial cds
12232	24448		1.51	5.1E-02	AF082467.1	NT	Cucumis melo polygalacturonase precursor (MPG3) mRNA, complete cds
508	13141	25626	1.76	5.0E-02	AF098004.1	NT	Mus musculus fatty acid amide hydrolase gene, exon 10
1246	13843	26360	6.63	5.0E-02	Z99104.1	NT	Bacillus subtilis complete genome (section 1 of 21); from 1 to 213080
2034	14616	27182	3.63	5.0E-02	P02810	SWISSPROT	SALIVARY ACIDIC PROLINE-RICH PHOSPHOPROTEIN 1/2 PRECURSOR (PRP-1/PRP-3) (PRP-2/PRP-4) (PIF-F/PIF-S) (PROTEIN APROTEIN C) [CONTAINS: PEPTIDE P-C]
2845	13634	26150	1.78	5.0E-02	U72742.1	NT	Oryctolagus cuniculus UDP-glucuronosyltransferase (UGT2B13) mRNA, complete cds
3381	15990		1.42	5.0E-02	7305610	NT	Mus musculus Unc-51 like kinase 2 (C. elegans) (ULK2), mRNA
3655	16258		1.06	5.0E-02	U32782.1	NT	Haemophilus influenzae Rd section 97 of 163 of the complete genome
3747	16348	28816	5.6	5.0E-02	U12769.2	NT	Anthraxa perryi period clock protein homolog mRNA, complete cds
5102	17674	30114	1.11	5.0E-02	AF188330.1	NT	Homo sapiens ubiquitin tetrahydrocysteine containing protein RoXaN mRNA, partial cds
6279	18887	31856	0.74	5.0E-02	AF086284.1	NT	Gallus gallus tyrosine kinase JAK1 (JAK1) mRNA, complete cds
6450	19051		1.23	5.0E-02	AJ242625.1	NT	Mus musculus Dmp-1 gene, exons 1-8
7544	20064	32938	10.74	5.0E-02	P35616	SWISSPROT	NEUROFILAMENT TRIPLET L PROTEIN (NEUROFILAMENT LIGHT POLYPEPTIDE)(NF-L)
10101	22596	35589	1.13	5.0E-02	AF305238.1	NT	Mus musculus Fas-interacting serine/threonine kinase 3 (Fist3) mRNA, complete cds
11364	23816	36877	2.87	5.0E-02	U67600.1	NT	Methanococcus jannaschii section 142 of 150 of the complete genome
11736	24924		7.22	5.0E-02	Q04047	SWISSPROT	NO-ON-TRANSIENT A PROTEIN
242	12901		23.23	4.9E-02	M14230.1	NT	Chicken 28-kDa vitamin D-dependent calcium-binding protein (CaBP-28) mRNA, complete cds



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392	13038	25528	3.62	4.9E-02	AF275948.1	NT	Homo sapiens ABCA1 (ABCA1) gene, complete cds
392	13038	25529	3.92	4.9E-02	AF275948.1	NT	Homo sapiens ABCA1 (ABCA1) gene, complete cds
3328	15938	28414	1.58	4.9E-02	P54258	SWISSPROT	ATROPHIN-1 (DENTATORUBRAL-PALLIDOLYSIAN ATROPHY PROTEIN)
3628	16231		0.63	4.9E-02	AA188940.1	EST_HUMAN	zq48a12.s1 Stragene hNT neuron (#937233) Homo sapiens cDNA clone IMAGE:832928 3' similar to contains Alu repetitive element, contains element MSR1 repetitive element
3651	16254	28726	0.91	4.9E-02	AA400914.1	EST_HUMAN	z78a03.s1 Soares testis NHT Homo sapiens cDNA clone IMAGE:728428 3'
3651	16254	28727	0.91	4.9E-02	AA400914.1	EST_HUMAN	z78a03.s1 Soares testis NHT Homo sapiens cDNA clone IMAGE:728428 3'
4968	17540	29982	1.59	4.9E-02	AW167821.1	EST_HUMAN	xg56g10.x1 NCI CGAP_U14 Homo sapiens cDNA clone IMAGE:2632386 3'
4968	17540	29983	1.59	4.9E-02	AW167821.1	EST_HUMAN	xg56g10.x1 NCI CGAP_U14 Homo sapiens cDNA clone IMAGE:2632386 3'
5372	17831	30345	0.61	4.9E-02	7662816	NT	Homo sapiens PRO1848 protein (PRO1848), mRNA
5408	17864		0.91	4.9E-02	AF135416.1	NT	Homo sapiens UDP-glucuronosyltransferase gene, complete cds
5425	17882		0.98	4.9E-02	AE001774.1	NT	Thermoboga maritima section 86 of 138 of the complete genome
5437	17892	30398	1.03	4.9E-02	M94063.1	NT	Brucella ovis heat shock protein hsp70 (dnaK) gene, complete cds; heat shock protein hsp40 (dnaJ) gene, complete cds
5573	18204	30854	1.95	4.9E-02	L0122.1	NT	Rat elastase II gene, exon 6
5573	18204	30855	1.95	4.9E-02	L0122.1	NT	Rat elastase II gene, exon 6
7196	19727	32578	0.99	4.9E-02	AE000980.1	NT	Archaeoglobus fulgidus section 127 of 172 of the complete genome
8551	21090		0.88	4.9E-02	AE002309.1	NT	Chlamydia muridarum, section 40 of 85 of the complete genome
8889	21228	34149	0.7	4.9E-02	AL161559.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 59
10193	22888	35681	0.54	4.9E-02	P19532	SWISSPROT	TRANSCRIPTION FACTOR E3
11280	23733	36788	3.67	4.9E-02	AF006303.1	NT	Homo sapiens prepro placental TGF-beta gene, complete cds
12148	24391		1.44	4.9E-02	8923980	NT	Homo sapiens CS box-containing WD protein (LOC55884), mRNA
12431	24573		2.92	4.9E-02	M19394.1	NT	Human gamma-B-crystallin (gamma 1-2) and gamma-C-crystallin (gamma 2-1) genes, complete cds
352	13002	25487	1.15	4.8E-02	D16471.1	NT	Human mRNA, Xq terminal portion
353	13002	25487	1.87	4.8E-02	D16471.1	NT	Human mRNA, Xq terminal portion
514	13147	25631	9.43	4.8E-02	AF003100.1	NT	Arabidopsis thaliana AP2 domain containing protein RAP2.7 mRNA, partial cds
2312	14884	27459	1.96	4.8E-02	W51983.1	EST_HUMAN	z049b02.s1 Soares, senescent, fibroblasts, NBHSF Homo sapiens cDNA clone IMAGE:325611 3' similar to gb:M30938 LUPUS KU AUTOANTIGEN PROTEIN P86 (HUMAN);
3244	15858	28339	2.34	4.8E-02	X17144.1	NT	Tetrahymena rostrata histone H3II and histone H4II intergenic DNA
4778	17358		1.32	4.8E-02	Z54280.1	NT	S.scrofa gene for skeletal muscle ryanodine receptor
5309	17871	30293	0.87	4.8E-02	U91914.1	NT	Streptococcus constellatus D-alanine:D-alanine ligase gene, partial cds
5380	17939	30352	4.1	4.8E-02	AF198339.1	NT	Homo sapiens lens epithelium-derived growth factor gene, alternatively spliced, complete cds
5380	17939	30353	4.1	4.8E-02	AF198339.1	NT	Homo sapiens lens epithelium-derived growth factor gene, alternatively spliced, complete cds

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8080	20622	33535	1.42	4.8E-02	AW388497.1	EST_HUMAN	MR2-ST0129-221099-012-b02 ST0129 Homo sapiens cDNA
9057	21594	34524	1.3	4.8E-02	AJ001398.1	NT	Fugu rubripes rps24 gene
9057	21594	34525	1.3	4.8E-02	AJ001398.1	NT	Fugu rubripes rps24 gene
12018	24315		1.93	4.8E-02	9632893	NT	Streptococcus thermophilus bacteriophage Sfi19, complete genome
6918	19577	32406	2.98	4.7E-02	W01153.1	EST_HUMAN	yz6708.r1 Soares melanocyte 2NbhM Homo sapiens cDNA clone IMAGE:291017 5' similar to contains Alu repetitive element
6965	19542	32364	0.78	4.7E-02	BF686625.1	EST_HUMAN	602143554F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4304772 5'
6965	19542	32365	0.78	4.7E-02	BF686625.1	EST_HUMAN	602143554F1 NIH_MGC_46 Homo sapiens cDNA clone IMAGE:4304772 5'
6998	19496	32317	1.57	4.7E-02	M62752.1	NT	Rat statin-related protein (s1) gene, complete CDS
8193	20734	33644	8.55	4.7E-02	X15543.1	NT	B. taurus mRNA for RF-36-DNA-binding protein
8883	21421	34346	1.12	4.7E-02	X89211.1	NT	H. sapiens DNA for endogenous retroviral like element
8906	21444		2.29	4.7E-02	AB026678.1	NT	Gallus gallus Wpict-8 gene, complete cds
9154	21689	34633	6.91	4.7E-02	X15543.1	NT	B. taurus mRNA for RF-36-DNA-binding protein
9585	22085	35024	0.55	4.7E-02	BF305237.1	EST_HUMAN	601892632F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4138414 5'
9650	22149		0.55	4.7E-02	A1873042.1	EST_HUMAN	we79c10.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2347314 3'
10834	23166	36177	1.55	4.7E-02	6754565	NT	Mus musculus ligand of numb-protein X (Lnx), mRNA
11430	23881	36945	1.69	4.7E-02	U73621.1	NT	Bos taurus paired box protein (pax-6) gene, partial cds
11430	23881	36946	1.69	4.7E-02	U73621.1	NT	Bos taurus paired box protein (pax-6) gene, partial cds
11951	25087		6.94	4.7E-02	AV648521.1	EST_HUMAN	AV648521 GLC Homo sapiens cDNA clone GLCBKD02 3'
12322	25089		1.47	4.7E-02	P52951	SWISSPROT	HOMEOBOX PROTEIN GBX-2 (GASTRULATION AND BRAIN-SPECIFIC HOMEOBOX PROTEIN 2)
292	12948	25435	0.81	4.6E-02	BE153583.1	EST_HUMAN	PM0-HT0339-251199-003-g05 HT0339 Homo sapiens cDNA
769	13388	25887	2.44	4.6E-02	AE000445.1	NT	Escherichia coli K-12 MG1655 section 335 of 400 of the complete genome
1335	13929		1.37	4.6E-02	A1014255.1	EST_HUMAN	am50d02.s1 Johnston frontal cortex Homo sapiens cDNA clone IMAGE:1538979 3' similar to TR:P90533
1403	13996	26525	9	4.6E-02	AV727059.1	EST_HUMAN	P90533 LIMA; contains element LTR1 repetitive element
2530	15094	27666	2.77	4.6E-02	AW236023.1	EST_HUMAN	AV727059 HTC Homo sapiens cDNA clone HTCBWC01 5'
2834	12948	25435	1.83	4.6E-02	BE153583.1	EST_HUMAN	xm24f03.x1 NCL CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2694653 3' similar to SW:GRF1_HUMAN
3042	15658	28138	0.7	4.6E-02	BE153583.1	EST_HUMAN	Q12849 G-RICH SEQUENCE FACTOR-1
3543	15658	28138	0.95	4.6E-02	BE153583.1	EST_HUMAN	PM0-HT0339-251199-003-g05 HT0339 Homo sapiens cDNA
4201	16790		0.97	4.6E-02	AF220365.1	NT	PM0-HT0339-251199-003-g05 HT0339 Homo sapiens cDNA
5909	18531	31256	1.44	4.6E-02	AF078662.1	NT	Mus musculus nucleolar RNA helicase II/Gu (ddx21) gene, complete cds
6377	18981	31760	3.77	4.6E-02	X61624.1	NT	Haplochromis burtoni gonadotropin-releasing hormone and GnRH-associated peptide precursor (GnRH2) gene, complete cds
						NT	C.reinhardtii atp2 (atpB) mRNA

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6377	18981	31761	3.77	4.6E-02	X61624.1	NT	C. reinhardtii alp2 (alpB) mRNA
6891	19625	32481	1.39	4.6E-02	AI149574.1	EST_HUMAN	q60b06.x1 Soares_placenta_8to9weeks_2NbHP8tc9W Homo sapiens cDNA clone IMAGE:1713971 3'
8590	21129	34046	2.82	4.6E-02	BE154006.1	EST_HUMAN	similar to contains L1.3 L1 repetitive element
11281	23734	36789	4.26	4.6E-02	AA913328.1	EST_HUMAN	PMO-HT0339-060400-009-G12 H10339 Homo sapiens cDNA
12541	24651		2.54	4.6E-02	X57808.1	NT	d27h09.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1524737 3'
472	13105	25598	2.71	4.5E-02	P22448	SWISSPROT	Human germline immunoglobulin lambda light chain gene
1260	13857	26373	0.78	4.5E-02	AF005730.1	NT	RETINOIC ACID RECEPTOR BETA (RAR-BETA)
1260	13857	26374	0.78	4.5E-02	AF005730.1	NT	Marburg virus strain MIS.Africa/Johannesburg/1975/Ozolin VP35 gene, complete cds
1840	14428	26980	3.54	4.5E-02	P32182	SWISSPROT	Marburg virus strain MIS.Africa/Johannesburg/1975/Ozolin VP35 gene, complete cds
2156	14733	27306	3.85	4.5E-02	AE003984.1	NT	HEPATOCYTE NUCLEAR FACTOR 3-BETA (HNF-3B)
3788	16386	28852	3.84	4.5E-02	AL163278.2	NT	Xylella fastidiosa, section 110 of 228 of the complete genome
6378	18982	31762	1.88	4.5E-02	AJ400877.1	NT	Homo sapiens chromosome 21 segment HS21C078
6831	19227	32032	0.89	4.5E-02	AL163280.2	NT	Homo sapiens ASCL3 gene, CEGP1 gene, C11orf14 gene, C11orf15 gene, C11orf16 gene and C11orf17 gene
8332	20873	33795	1.8	4.5E-02	AF036884.1	NT	Homo sapiens chromosome 21 segment HS21C080
9860	22357	35337	5.91	4.5E-02	AA325216.1	EST_HUMAN	Arabidopsis thaliana CCAAT-box binding factor HAP3 homolog gene, complete cds
10117	22612	35802	0.77	4.5E-02	AB000470.1	NT	EST28167 Cerebellum II Homo sapiens cDNA 5' and similar to similar to neuro-D4 protein
11847	24276	31018	2.92	4.5E-02	11418013	NT	Gallus gallus mRNA for alpha1 integrin, complete cds
12367	24973	30636	6.27	4.5E-02	AA191097.1	EST_HUMAN	Homo sapiens ret finger protein-like 3 (RFPL3), mRNA
237	12997		3.08	4.4E-02	BE972733.1	EST_HUMAN	zq4311.1 Stratagene HNT neuron (#837233) Homo sapiens cDNA clone IMAGE:832493 5'
2144	14722		6.8	4.4E-02	P31568	SWISSPROT	601652154F1 NIH_MGC_82 Homo sapiens cDNA clone IMAGE:3933388 5'
2532	15096	27688	2.62	4.4E-02	AW875475.1	EST_HUMAN	HYPOTHETICAL PROTEIN (ORF 2280)
3702	16303	28771	1.5	4.4E-02	AF159160.1	NT	QV2-PT0012-010300-070-g02 PT0012 Homo sapiens cDNA
4733	17314	29756	1.23	4.4E-02	AF109807.1	NT	Myxococcus xanthus serine/threonine kinase Pkn10 (pkn10) gene, complete cds
4733	17314	29757	1.23	4.4E-02	AF109807.1	NT	Homo sapiens S164 gene, partial cds; PS1 and hypothetical protein genes, complete cds; and S171 gene, partial cds
7172	19704	32551	1.56	4.4E-02	AF095824.1	NT	Canis familiaris matrix metalloproteinase 9 (MMP-9) mRNA, partial cds
7172	19704	32552	1.56	4.4E-02	AF095824.1	NT	Canis familiaris matrix metalloproteinase 9 (MMP-9) mRNA, partial cds
8687	21228	34146	2.04	4.4E-02	AA736969.1	EST_HUMAN	hw13h03.s1 NCL_CGAP_SS1 Homo sapiens cDNA clone IMAGE:1239221 3'
10951	23486	36488	4.58	4.4E-02	AF060669.1	NT	Hepatitis E virus strain HEV-US2 polyprotein (ORF1), (ORF3), and capsid protein (ORF2) genes, complete cds
11080	23592	36628	2.63	4.4E-02	AA498739.1	EST_HUMAN	es33704.1 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:897631 5'

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11664	24088		3.26	4.4E-02	AB040926.1	NT	Homo sapiens mRNA for KIAA1493 protein, partial cds
813	13431	25936	8.91	4.3E-02	AF003249.1	NT	Morone saxatilis myosin heavy chain FM3A (FM3A) mRNA, complete cds
2603	15165	27732	1.16	4.3E-02	AV704878.1	EST_HUMAN	AV704878 ADB Homo sapiens cDNA clone ADBA0808 5'
3477	16083	28557	8.12	4.3E-02	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
3720	16321		1.12	4.3E-02	AF060568.1	NT	Homo sapiens promyelocytic leukemia zinc finger protein (PLZF) gene, complete cds
6622	19219	32023	5.71	4.3E-02	P30427	SWISSPROT	PLECTIN
6622	19219	32024	5.71	4.3E-02	P30427	SWISSPROT	PLECTIN
6830	19420	32236	0.88	4.3E-02	AA652268.1	EST_HUMAN	ns66c12.s1 NCL CGAP_P2 Homo sapiens cDNA clone IMAGE:118986
8450	20990	33908	0.74	4.3E-02	AF293359.1	NT	Homo sapiens desmocollin 3 (DSC3) gene, complete cds, alternatively spliced
8736	21275	34196	0.98	4.3E-02	X55322.1	NT	H. sapiens NCAM mRNA for neural cell adhesion molecule
8736	21275	34197	0.98	4.3E-02	X55322.1	NT	H. sapiens NCAM mRNA for neural cell adhesion molecule
855	13471	25892	1.57	4.2E-02	AU123327.1	EST_HUMAN	AU123327 NT2RM2 Homo sapiens cDNA clone NT2RM2000020 5'
889	13513		2.24	4.2E-02	AU123327.1	EST_HUMAN	AU123327 NT2RM2 Homo sapiens cDNA clone NT2RM2000020 5'
929	13542	26060	0.69	4.2E-02	AW003645.1	EST_HUMAN	wx34g01.x1 NCL CGAP_P11 Homo sapiens cDNA clone IMAGE:2545584 3' similar to TR:Q63291 Q63291
1758	14348		1.32	4.2E-02	AL449068.1	NT	L1 RETROPOSON, ORF2 MRNA, contains L1 L1 L1 L1 L1 repetitive element; Thermoplasma acidophilum complete genome; segment 4/5
3190	15802	28274	0.98	4.2E-02	AI493472.1	EST_HUMAN	q95f10.x1 NCL CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2019787 3' similar to gb:M35718
3726	16327	28794	1.36	4.2E-02	P23091	SWISSPROT	FIBROBLAST GROWTH FACTOR RECEPTOR BFR-2 PRECURSOR (HUMAN); TRANSFORMING PROTEIN MAF
4410	16995	29437	1.03	4.2E-02	U26874.1	NT	Saccharomyces cerevisiae general sporulation (GSG1) gene, complete cds
4410	16995	29438	1.03	4.2E-02	U26874.1	NT	Saccharomyces cerevisiae general sporulation (GSG1) gene, complete cds
4854	17432	29883	0.69	4.2E-02	BF342985.1	EST_HUMAN	602017105F1 NCL CGAP_Bm84 Homo sapiens cDNA clone IMAGE:4152672 5'
							Homo sapiens cytochrome P450 polypeptide 43 (CYP3A43) gene, partial cds; cytochrome P450 polypeptide 4 (CYP3A4) and cytochrome P450 polypeptide 7 (CYP3A7) genes, complete cds; and cytochrome P450 polypeptide 5 (CYP3A5) gene, partial cds
5802	18427	31145	1.49	4.2E-02	AF280107.1	NT	Homo sapiens cytochrome P450 polypeptide 43 (CYP3A43) gene, partial cds; cytochrome P450 polypeptide 4 (CYP3A4) and cytochrome P450 polypeptide 7 (CYP3A7) genes, complete cds; and cytochrome P450 polypeptide 5 (CYP3A5) gene, partial cds
5802	18427	31146	1.49	4.2E-02	AF280107.1	NT	Legionella pneumophila catalase-peroxidase (katA) gene, complete cds
7534	20054	32927	5.29	4.2E-02	AF276752.1	NT	ALPHA-ACTININ 3, NON MUSCULAR (F-ACTIN CROSS LINKING PROTEIN)
8745	21284	34206	3.5	4.2E-02	P05095	SWISSPROT	T-BRAIN-1 PROTEIN (T-BOX BRAIN PROTEIN 1) (TBR-1) (TES-56)
10069	22564	35559	1.17	4.2E-02	Q16650	SWISSPROT	on33b11.s1 NCL CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1558461 3' similar to gb:M55290 INTERLEUKIN-12 BETA CHAIN PRECURSOR (HUMAN);
10919	23438	36459	3.12	4.2E-02	AA976118.1	EST_HUMAN	PM3-BN0174-250500-009-d10 BN0174 Homo sapiens cDNA
11187	23692	36739	2.3	4.2E-02	BE815822.1	EST_HUMAN	

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11187	23692	38740	2.3	4.2E-02	BE815922.1	EST_HUMAN	PM3-BN0174-250500-009-d10 BN0174 Homo sapiens cDNA
11379	23831	38894	2.08	4.2E-02	AF178458.1	NT	PRRS isolate PRRSV36 envelope glycoprotein gene, complete cds
12226	25023		3.4	4.2E-02	A1883494.1	EST_HUMAN	wf49g10.x1 NCI_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2510850 3'
536	13187	25848	0.7	4.1E-02	AF200629.1	NT	Homo sapiens HPS1 gene, intron 5
2701	15258	27828	2.87	4.1E-02	AE002330.2	NT	Chlamydia muridarum, section 60 of 85 of the complete genome
4571	17154		8.95	4.1E-02	AW893484.1	EST_HUMAN	QV1-NN0012-180400-184-r06 NN0012 Homo sapiens cDNA
5295	17857		0.69	4.1E-02	X85880.1	NT	L monocytogenes type 3 partial lap gene (strain 443)
5824	18448	31170	0.98	4.1E-02	BE251894.1	EST_HUMAN	601107535F1 NIH_MGC_18 Homo sapiens cDNA clone IMAGE:3343856 5'
5824	18448	31171	0.98	4.1E-02	BE251894.1	EST_HUMAN	601107535F1 NIH_MGC_18 Homo sapiens cDNA clone IMAGE:3343856 5'
6982	19539		0.87	4.1E-02	X75881.1	NT	A thelania mRNA for plasma membrane intrinsic protein 1a
7156	19688	32532	1.92	4.1E-02	AE002132.1	NT	Ureaplasma urealyticum section 33 of 59 of the complete genome
7522	20042	32911	1.76	4.1E-02	7682347	NT	Homo sapiens KIAA0867 protein (KIAA0867), mRNA
							Fugu rubripes neural cell adhesion molecule L1 homolog (L1-CAM) gene, complete cds; putative protein 1 (PUT1) gene, partial cds; mitosis-specific chromosome segregation protein SMC1 homolog (SMC1) gene, complete cds; and calcium channel alpha-1 subunit>
7742	20250	33143	3.14	4.1E-02	AF026198.1	NT	CUTICLE COLLAGEN 34
8577	21116	34036	0.56	4.1E-02	P34687	SWISSPROT	EST84291 Cdon adenocarcinoma IV Homo sapiens cDNA 5' end
9081	21617	34552	0.85	4.1E-02	AA372398.1	EST_HUMAN	Brassica napus glh gene for plastid glutamine synthetase, exons 1-12
12572	25024	30818	24.9	4.1E-02	AJ271908.1	NT	Homo sapiens mRNA for KIAA1471 protein, partial cds
3281	15892	28371	3.71	4.0E-02	AB040804.1	NT	Human retinoblastoma susceptibility gene exons 1-27, complete cds
3868	18466	28929	0.98	4.0E-02	L11910.1	NT	Homo sapiens PTS gene for 6-pyruvoyltetrahydropterin synthase, complete cds
5296	17858	30284	0.58	4.0E-02	AB042297.1	NT	Homo sapiens cytochrome P450 polypeptide 43 (CYP3A43) gene, partial cds; cytochrome P450 polypeptide 4 (CYP3A4) and cytochrome P450 polypeptide 7 (CYP3A7) genes, complete cds; and cytochrome P450 polypeptide 5 (CYP3A5) gene, partial cds
5581	18212	30661	5.51	4.0E-02	AF280107.1	NT	7n52h07.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3568380 3' similar to TR:O75298 O75298
6362	18966	31744	1.68	4.0E-02	BF110434.1	EST_HUMAN	R28124_1
7678	20189	33078	5.8	4.0E-02	L23838.1	NT	Strongylocentrotus purpuratus homolog of human bone morphogenetic protein 1 (submp) mRNA, complete cds
7743	20251	33144	0.87	4.0E-02	AB000381.1	NT	Homo sapiens DNA for GPI-anchored molecule-like protein, complete cds
7743	20251	33145	0.87	4.0E-02	AB000381.1	NT	Homo sapiens DNA for GPI-anchored molecule-like protein, complete cds
8651	21190	34108	2.84	4.0E-02	P08640	SWISSPROT	GLUCOAMYLASE S1/S2 PRECURSOR (GLUCAN 1,4-ALPHA-GLUCOSIDASE) (1,4-ALPHA-D-GLUCAN
8562	22062		0.84	4.0E-02	BF678376.1	EST_HUMAN	GLUCOHYDROLASE)
8586	22086	35051	3.35	4.0E-02	AJ000941.1	NT	Methanobacterium thermoautotrophicum strain Marburg, Thid:fumarate reductase subunit A

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9895	22392		1.28	4.0E-02	D43949.1	NT	Human mRNA for KIAA0082 gene, partial cds
11608	24051		1.62	4.0E-02	AJ001018.1	NT	Kluyveromyces fragilis gene for Ca <sup>++</sup> ATPase
11841	24834	30796	18.69	4.0E-02	AJ001056.1	NT	Ovis aries mRNA for acetyl-coA carboxylase
1159	13762	26273	3.8	3.9E-02	BF516149.1	EST_HUMAN	UI-H-BW1-anx-h-08-0-UI.s1 NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3084134.3
1390	13984	26510	1.88	3.9E-02	P41047	SWISSPROT	FAS ANTIGEN LIGAND
2004	14586	27145	2.67	3.9E-02	AJ403386.1	NT	M. musculus DNA for desmin-binding fragment DesD7
2728	15283		1.85	3.9E-02	4506862	NT	Homo sapiens succinate dehydrogenase complex, subunit C, integral membrane protein, 15kD (SDHC)
5325	17887	30303	0.6	3.9E-02	AW392417.1	EST_HUMAN	RO6-ST0258-171189-021-C08 ST0258 Homo sapiens cDNA
5344	17905	30320	1.14	3.9E-02	8924019	NT	Homo sapiens hypothetical protein PRO1163 (PRO1163), mRNA
5344	17905	30321	1.14	3.9E-02	8924019	NT	Homo sapiens hypothetical protein PRO1163 (PRO1163), mRNA
5687	18313	30810	0.73	3.9E-02	D50608.1	NT	Rat gene for cholecystokinin type-A receptor (CCKAR), complete cds
5906	18528	31254	1.24	3.9E-02	BE96884.1	EST_HUMAN	601649874F1 NIH_MGC_74 Homo sapiens cDNA clone IMAGE:3933642.5
6018	18637	31377	0.68	3.9E-02	BF675203.1	EST_HUMAN	602138132F1 NIH_MGC_93 Homo sapiens cDNA clone IMAGE:4274910.5
7118	19458	32273	1.01	3.9E-02	BE271437.1	EST_HUMAN	601140720F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3049830.5
7781	20324	33229	0.93	3.9E-02	BF239613.1	EST_HUMAN	601908948F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4134779.5
8004	20546	33449	0.56	3.9E-02	AJ229041.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22; segment 1/3
8004	20546	33450	0.56	3.9E-02	AJ229041.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22; segment 1/3
11287	20289	33188	1.6	3.9E-02	P48778	SWISSPROT	ANTIGEN GOR
11691	24981		7.19	3.9E-02	AB042553.1	NT	Felis catus G-CSF gene for granulocyte colony-stimulating factor, complete cds
12373	24543		1.73	3.9E-02	U66061.1	NT	Human germ-line T-cell receptor beta chain TCRBV17S1A1T, TCRBV2S1, TCRBV10S1P, TCRBV29S1P, TCRBV19S1P, TCRBV15S1, TCRBV11S1A1T, HVB relic, TCRBV28S1P, TCRBV34S1, TCRBV14S1, TCRBV3S1, TCRBV4S1A1T, TRY4, TRY5, TRY6, TRY7, TRY8, TCRBD1, TCRBJ1S1, TCRBJ1S2, >
12503	24902		64.84	3.9E-02	AL049866.2	NT	Mus musculus chromosome X contigB, X-linked lymphocyte regulated 5 gene, Zinc finger protein 275, Zinc finger protein 92, mmxq28orf
1995	14577	27137	1.24	3.9E-02	BE885137.1	EST_HUMAN	601510891F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3912215.5
4997	17571	30015	0.99	3.9E-02	BE393275.1	EST_HUMAN	601308488F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3628757.5
4997	17571	30016	0.99	3.9E-02	BE393275.1	EST_HUMAN	601308488F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3628757.5
5062	17635	30078	0.93	3.9E-02	AU124122.1	EST_HUMAN	AU124122 NT2RM2 Homo sapiens cDNA clone NT2RM2001698.5
5632	18261	30733	1.19	3.9E-02	M11228.1	NT	Human protein C gene, complete cds
6237	18846	31617	1.07	3.9E-02	P10284	SWISSPROT	HOMEOBOX PROTEIN HOX-B4 (HOX-2.6)
7359	19885	32748	1.43	3.9E-02	6005700	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 8 (ABCA8), mRNA

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8598	21137		1.3	3.8E-02	M60875.1	NT	Human von Willebrand factor gene, exons 23 through 34
10506	23000		0.47	3.8E-02	AE001328.1	NT	Chlamydia trachomatis section 56 of 87 of the complete genome
10532	23069	36082	2.17	3.8E-02	AF143952.2	NT	Homo sapiens PELOTA (PELOTA) gene, complete cds
1029	13639	28154	3.68	3.7E-02	P18137	SWISSPROT	LAMININ ALPHA-1 CHAIN PRECURSOR (LAMININ A CHAIN)
1432	14025	26553	1.15	3.7E-02	L14561.1	NT	Homo sapiens plasma membrane calcium ATPase isoform 1 (ATP2B1) gene, alternative splice products, partial cds
2278	14852	27430	4.49	3.7E-02	AI984806.1	EST_HUMAN	wr85e08.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2494502.3'
2813	15175	27743	0.93	3.7E-02	AB018261.1	NT	Homo sapiens mRNA for KIAA0718 protein, partial cds
3086	15701	28174	0.97	3.7E-02	P78944	SWISSPROT	EOMESODERMIN
3088	15703	28175	4.74	3.7E-02	BF312903.1	EST_HUMAN	601896233F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4125584.5'
7138	25118		0.73	3.7E-02	AP000063.1	NT	Aeropyrum pernix genomic DNA, section 617
9928	22424		0.89	3.7E-02	AA782516.1	EST_HUMAN	ai55c09.s1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone 1360912.3'
11735	24139	37156	7.89	3.7E-02	BF124974.1	EST_HUMAN	601762117F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:4024973.5'
12435	24868	30707	3.02	3.7E-02	11418392	NT	Homo sapiens solute carrier family 22 (organic cation transporter), member 1 (SLC22A1), mRNA
3715	16318	28784	0.82	3.6E-02	X73221.1	NT	H. vulgare Ss1 gene for sucrose synthase
3723	16324	28781	0.87	3.6E-02	AL096806.1	NT	Homo sapiens genomic region containing hypervariable minisatellites chromosome 10(10q26.3) of Homo sapiens
5620	18249	30701	0.77	3.6E-02	X59403.1	NT	C. glutamicum gap, pgk and tpi genes for glyceraldehyde-3-phosphate, phosphoglycerate kinase and triosephosphate isomerase
5620	18249	30717	0.77	3.6E-02	X59403.1	NT	C. glutamicum gap, pgk and tpi genes for glyceraldehyde-3-phosphate, phosphoglycerate kinase and triosephosphate isomerase
8808	18399	32213	5.32	3.6E-02	AW945518.1	EST_HUMAN	CM2-EN0013-110500-192-b10 EN0013 Homo sapiens cDNA
8808	18399	32214	5.32	3.6E-02	AW945518.1	EST_HUMAN	CM2-EN0013-110500-192-b10 EN0013 Homo sapiens cDNA
7143	18676	32516	1.88	3.6E-02	AF025952.1	NT	Chromatium vinosum sulfur globule protein Cyt precursor (sgp2) gene, complete cds
7347	19873	32739	3.52	3.6E-02	AA714521.1	EST_HUMAN	hw20e05.s1 NCL_CGAP_GC80 Homo sapiens cDNA clone IMAGE:1241024.3' similar to gb:J00314.1_rna2
7628	20141	33020	0.86	3.6E-02	BE143078.1	EST_HUMAN	TUBULIN BETA-1 CHAIN (HUMAN);
9313	21827	34776	1.87	3.6E-02	U20608.1	NT	MR0-HT0158-030200-003-008 HT0158 Homo sapiens cDNA
9313	21827	34777	1.87	3.6E-02	U20608.1	NT	Dicystostellum discoidale unknown spore germination-specific protein-like protein, orf1, orf2 and orf3 genes, complete cds
9530	22030	34989	0.72	3.6E-02	BF347586.1	EST_HUMAN	Dicystostellum discoidale unknown spore germination-specific protein-like protein, orf1, orf2 and orf3 genes, complete cds
928	13541	26059	1.57	3.5E-02	U09506.1	NT	Drosophila melanogaster tigrin mRNA, complete cds
1048	13654	26166	2.29	3.5E-02	AF253417.1	NT	Homo sapiens microsomal epoxide hydrolase (EPHX1) gene, complete cds

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1610	14203	26736	1.49	3.5E-02	BF678085.1	EST_HUMAN	602085136F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4249377 5'
1610	14203	26737	1.49	3.5E-02	BF678085.1	EST_HUMAN	602085136F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4249377 5'
4293	16879	29326	1.91	3.5E-02	AE001773.1	NT	Thermotoga maritima section 85 of 136 of the complete genome
4406	16991	29435	1.16	3.5E-02	P53780	SWISSPROT	CYSTATHIONINE BETA-LYASE PRECURSOR (CBL) (BETA-CYSTATHIONASE) (CYSTEINE LYASE)
6370	18974	31752	2.11	3.5E-02	J01238.1	NT	Maize actin 1 gene (MAC1), complete cds
7918	20460		0.82	3.5E-02	H29951.1	EST_HUMAN	yp44a05.r1 Soares retina N2b5HR Homo sapiens cDNA clone IMAGE:190256 5' similar to contains Alu repetitive element;
8558	21097	34018	3.5	3.5E-02	BE958970.1	EST_HUMAN	601644701R2 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:3929737 3'
9931	22427	35401	2.44	3.5E-02	X76642.1	NT	L.lactis MG1363 grpE and dnaK genes
9977	22472	35455	0.49	3.5E-02	BE561042.1	EST_HUMAN	601344661F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3677654 5'
11367	23819	36880	1.92	3.5E-02	AW861641.1	EST_HUMAN	PM1-CT0328-291299-002-h03 CT0326 Homo sapiens cDNA
11367	23819	36881	1.92	3.5E-02	AW861641.1	EST_HUMAN	PM1-CT0328-291299-002-h03 CT0326 Homo sapiens cDNA
12357	24534		1.39	3.5E-02	AF009683.1	NT	Homo sapiens T cell receptor beta locus, TCRBV8S5P to TCRBV21S2A2 region
12429	24913		4.38	3.5E-02	BE276948.1	EST_HUMAN	601178765F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3543833 5'
604	13233	25706	1.18	3.4E-02	AK024424.1	NT	Homo sapiens mRNA for FLJ00013 protein, partial cds
604	13233	25707	1.18	3.4E-02	AK024424.1	NT	Homo sapiens mRNA for FLJ00013 protein, partial cds
605	13233	25706	3.27	3.4E-02	AK024424.1	NT	Homo sapiens mRNA for FLJ00013 protein, partial cds
605	13233	25707	3.27	3.4E-02	AK024424.1	NT	Homo sapiens mRNA for FLJ00013 protein, partial cds
1089	13694	26203	3.22	3.4E-02	AW274020.1	EST_HUMAN	xy26007.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2814253 3' similar to
1248	13845		6.54	3.4E-02	113454599	NT	SW:0211_HUMAN P53801 PUTATIVE SURFACE GLYCOPROTEIN C21ORF1 PRECURSOR ;
2435	15002	27574	1.82	3.4E-02	T57160.1	EST_HUMAN	Homo sapiens hypothetical protein FLJ13220 (FLJ13220), mRNA
3478	16084	28558	1.11	3.4E-02	AL163208.2	NT	yc20a08.r1 Stratagene lung (H937210) Homo sapiens cDNA clone IMAGE:81250 5' similar to contains MER29 repetitive element
3843	16442	28903	0.88	3.4E-02	BE839514.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C008
3993	16591	29063	4.29	3.4E-02	AW794952.1	EST_HUMAN	RC3-FN0155-060700-011-d10 FN0155 Homo sapiens cDNA
4703	17285	29730	3.17	3.4E-02	X59799.1	NT	RC6-UM0015-210200-021-A10 UM0015 Homo sapiens cDNA
5217	17782		2.61	3.4E-02	Q26457	SWISSPROT	M.musculus S-antigen gene promoter region
5237	17801	30220	1.47	3.4E-02	AJ012469.1	NT	LA PROTEIN HOMOLOG (LA RIBONUCLEOPROTEIN) (LA AUTOANTIGEN HOMOLOG)
6353	18958		0.68	3.4E-02	BF131628.1	EST_HUMAN	Caenorhabditis elegans mRNA for DYS-1 protein, partial
6938	18046	30468	4.63	3.4E-02	U24393.1	NT	601820445F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:4052434 5'
8204	20745		3.76	3.4E-02	A1869629.1	EST_HUMAN	Human lysyl oxidase-like protein gene, exon 3



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8882	21221	34141	1.64	3.4E-02	AA684886.1	EST_HUMAN	nu70f08.s1 NCI_CGAP_Alv1 Homo sapiens cDNA clone IMAGE:1216071 similar to contains Alu repetitive element; contains element MER25 MER25 repetitive element ;
8848	21387		6.71	3.4E-02	AA194308.1	EST_HUMAN	zq04f11.s1 Stratagene muscle 837209 Homo sapiens cDNA clone IMAGE:628749 3' similar to TR:G1017425 G1017425
8893	22192		0.53	3.4E-02	A1092719.1	EST_HUMAN	IPISGKPLPKVTLSDGVPLKATMRN TEITAE NLTKESVTADAGRYEITANSSGTTKAFINIVLDRPG
395	13041		11.74	3.3E-02	AA398735.1	EST_HUMAN	PPT GPVVISDITESVTLKWEPPKYDGGSOVTN YLLKRETSIAVWTEVSATVARTMKVMKL ... ;
1209	13809	28322	18.12	3.3E-02	AB035887.1	NT	alpha8h08.x1 Soares parathyroid tumor_NbHPA Homo sapiens cDNA clone IMAGE:1683519 3'
1681	14273	28808	1.29	3.3E-02	AF110783.1	NT	z75e08.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:728198 3'
1775	14365		1.28	3.3E-02	AE000700.1	NT	Cricetulus griseus CYP2A17 mRNA for cytochrome P450 2A17, complete cds
2131	14709		2.05	3.3E-02	R09112.1	EST_HUMAN	Homo sapiens skeletal muscle LIM-protein 1 (FHL1) gene, complete cds
3408	16015	28494	0.85	3.3E-02	H02389.1	EST_HUMAN	Aquifex aeolicus section 32 of 109 of the complete genome
4256	14273	28808	2.91	3.3E-02	AF110783.1	NT	Y25c09.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:127888 5'
4566	17149	29596	2.15	3.3E-02	6755862	NT	Y35h02.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:150771 5'
6561	18159	31896	26.84	3.3E-02	BF245995.1	EST_HUMAN	Homo sapiens skeletal muscle LIM-protein 1 (FHL1) gene, complete cds
6561	19159	31957	26.84	3.3E-02	BF245995.1	EST_HUMAN	Mus musculus tumor rejection antigen gp96 (Tra1), mRNA
9246	21772	34721	0.73	3.3E-02	BF115621.1	EST_HUMAN	601853910F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4073787 5'
9246	21772	34722	0.73	3.3E-02	BF115621.1	EST_HUMAN	601853910F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4073787 5'
9345	21859	34807	0.59	3.3E-02	AA488202.1	EST_HUMAN	7m92d04.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:3562423 3'
9345	21859	34808	0.59	3.3E-02	AA488202.1	EST_HUMAN	7m92d04.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:3562423 3'
10491	22885		0.5	3.3E-02	H38109.1	EST_HUMAN	ad08f09.s1 Soares NbHFB Homo sapiens cDNA clone IMAGE:877873 3' similar to gb:X70944_cds1
11000	23514	36548	3.5	3.3E-02	BF691107.1	EST_HUMAN	MYOBLAST CELL SURFACE ANTIGEN 24.1D5 (HUMAN);
11932	24268		2.14	3.3E-02	T98545.1	EST_HUMAN	MYOBLAST CELL SURFACE ANTIGEN 24.1D5 (HUMAN);
12089	24358		2.05	3.3E-02	M81890.1	NT	602247171F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:4332497 5'
137	12802	25291	1.87	3.2E-02	AJ002005.1	NT	y649f11.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:121101 5'
1165	13767	26277	19.04	3.2E-02	AF098275.1	NT	Human interleukin 11 (IL11) gene, complete mRNA
1165	13767	26278	19.04	3.2E-02	AF098275.1	NT	Oryctolagus cuniculus gene encoding ileal sodium-dependent bile acid transporter
1808	14398	26943	1.36	3.2E-02	AF128894.1	NT	Drosophila melanogaster heat shock protein 68 (hsp68) gene, hsp68d allele, complete cds
2164	14741		1.35	3.2E-02	P28955	SWISSPROT	Drosophila melanogaster heat shock protein 68 (hsp68) gene, hsp68d allele, complete cds
2865	12802	25291	0.59	3.2E-02	AJ002005.1	NT	Homo sapiens telomerase reverse transcriptase (TERT) gene, exons 7-16 and complete cds
3168	15782	28253	12.01	3.2E-02	BE667353.1	EST_HUMAN	LARGE TEGUMENT PROTEIN
							Oryctolagus cuniculus gene encoding ileal sodium-dependent bile acid transporter
							601442431F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3846727 5'

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3776	18376	28842	1.3	3.2E-02	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
4299	18885		20.05	3.2E-02	X94768.1	NT	H. sapiens RP3 gene (XLRP gene 3)
4882	17457	29909	3.35	3.2E-02	AF114182.1	NT	Saxifraga nidifica maturase (matK) gene, chloroplast gene encoding chloroplast protein, partial cds
5726	18352	31055	1.45	3.2E-02	X68709.1	NT	S. griseocarneum whiG-Stv gene
5726	18352	31056	1.45	3.2E-02	X68709.1	NT	S. griseocarneum whiG-Stv gene
6846	19242	32045	2.59	3.2E-02	M32437.1	NT	Rat/polyomavirus left junction in cell line W98.14
6847	19243		27.51	3.2E-02	T89367.1	EST_HUMAN	yd33h12.s1 Soares fetal liver spleen 1NPLS Homo sapiens cDNA clone IMAGE:110087 3' similar to contains
6722	18316	32119	3.78	3.2E-02	AF173845.1	NT	Alu repetitive element contains LTR1 repetitive element ;
7739	20247	33140	0.85	3.2E-02	11424049	NT	Seguinus oedipus tissue kallikrein gene, complete cds
8242	20783	33702	13.06	3.2E-02	6890565	NT	Homo sapiens cytochrome P450, subfamily 11B (phenobarbital-inducible) (CYP2B), mRNA
8871	21410		0.69	3.2E-02	AF109718.1	NT	Mus musculus kinesin family member 3c (Kif3c), mRNA
9152	21687	34630	1.06	3.2E-02	A1278971.1	EST_HUMAN	Homo sapiens chromosome 3 subtelomeric region
9152	21687	34631	1.06	3.2E-02	A1278971.1	EST_HUMAN	qm17b04.x1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1882063 3'
							qm17b04.x1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1882063 3'
							zg54b12.s1 Soares pineal_gland_N3HPG Homo sapiens cDNA clone IMAGE:397151 3' similar to
							gb:L08441 CYTOCHROME C OXIDASE POLYPEPTIDE III (HUMAN);
9969	22464		4.05	3.2E-02	AA719795.1	EST_HUMAN	Macaca mulatta chemokine receptor CCR5 mRNA, complete cds
10260	22755	35743	0.95	3.2E-02	U98782.1	NT	Homo sapiens dual specificity phosphatase 4 (DUSP4) mRNA
1303	13897		1.8	3.1E-02	4503416	NT	NEURONAL ACETYLCHOLINE RECEPTOR PROTEIN, ALPHA-3 CHAIN PRECURSOR (GF-ALPHA-3)
1348	13943	28466	1.26	3.1E-02	P18845	SWISSPROT	Mus musculus adaptor-related protein complex AP-3, delta subunit (Ap3d), mRNA
1936	14520	27076	1.52	3.1E-02	6871564	NT	Drosophila melanogaster mRNA for headcase protein
2017	14599		1.14	3.1E-02	Z50097.1	NT	IL2-BT0733-130400-087-A08 BT0733 Homo sapiens cDNA
5207	17772		0.87	3.1E-02	BE091869.1	EST_HUMAN	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 50
5331	17892		3.09	3.1E-02	AL161550.2	NT	AU119008 HEMBA1 Homo sapiens cDNA clone HEMBA1004842 5'
5371	18916		0.58	3.1E-02	AU119006.1	EST_HUMAN	Human leukemia inhibitory factor receptor (LIFR) gene, promoter and partial exon 1
5468	18102	30421	1.13	3.1E-02	U78104.1	NT	zs81a06.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:703858 5'
5563	18194		2.32	3.1E-02	AA278478.1	EST_HUMAN	602066783F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4065789 5'
5829	18453	31176	0.8	3.1E-02	BF68742.1	EST_HUMAN	Enterococcus faecalis surface protein precursor, gene, complete cds
9844	22439	35417	3.63	3.1E-02	AF034779.1	NT	he37f07.x1 NCI_CGAP_CML1 Homo sapiens cDNA clone IMAGE:2921221 3'
12667	24737		2.24	3.1E-02	AW468414.1	EST_HUMAN	
							Pitykteinens minutus cytochrome oxidase I gene, partial cds; mitochondrial gene for mitochondrial product
1684	14257		2.3	3.0E-02	AF187125.1	NT	z55h03.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:727253 5'
2821	15183	27749	0.9	3.0E-02	AA402242.1	EST_HUMAN	Saccharomyces cerevisiae stem-loop mutation suppressor SSL2 gene, complete cds
3623	16226	28704	1.24	3.0E-02	M94176.1	NT	

Table 4

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3714	18315	28783	3.07	3.0E-02	AF247844.1	NT	Pseudomonas fluorescens family II aminotransferase gene, complete cds
3808	18407		0.79	3.0E-02	AW820223.1	EST_HUMAN	QV2-ST0298-150200-040-e09 ST0298 Homo sapiens cDNA
4021	18619		0.74	3.0E-02	AA384003.1	EST_HUMAN	EST74530 Pineal gland II Homo sapiens cDNA 5' end
5000	17573	30017	1.04	3.0E-02	BE782830.1	EST_HUMAN	601472331F1 NIH_MGC_87 Homo sapiens cDNA clone IMAGE:3875503 5'
5208	17773	30195	7.49	3.0E-02	AF281074.1	NT	Homo sapiens neuropilin 2 (NRP2) gene, complete cds, alternatively spliced
5208	17773	30196	7.49	3.0E-02	AF281074.1	NT	Homo sapiens neuropilin 2 (NRP2) gene, complete cds, alternatively spliced
5303	17865	30289	1.1	3.0E-02	BE988917.1	EST_HUMAN	601472331F1 NIH_MGC_87 Homo sapiens cDNA clone IMAGE:3933928 3'
5590	18221		3.82	3.0E-02	AB046793.1	NT	Homo sapiens mRNA for KIAA1573 protein, partial cds
6402	19005	31784	0.76	3.0E-02	N99815.1	EST_HUMAN	za39a10.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:294908 5' similar to contains element TAR1 repetitive element
6402	19005	31785	0.76	3.0E-02	N99815.1	EST_HUMAN	za39a10.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:294908 5' similar to contains element TAR1 repetitive element
6884	19819	32453	2.93	3.0E-02	AJ242906.1	NT	Cyprinus carpio mRNA for inducible nitric oxide synthase (NOS) gene
6987	19485	32306	3.15	3.0E-02	BE889948.1	EST_HUMAN	601512206F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913848 5'
6987	19485	32307	3.15	3.0E-02	BE889948.1	EST_HUMAN	601512206F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913848 5'
7131	19471	32280	1.93	3.0E-02	AF213884.1	NT	Homo sapiens nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 (NFKB1) gene, complete cds
7131	19471	32281	1.93	3.0E-02	AF213884.1	NT	Homo sapiens nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 (NFKB1) gene, complete cds
7282	19810	32666	1.32	3.0E-02	M86524.1	NT	Human dystrophin gene
7883	20088		0.76	3.0E-02	BF246381.1	EST_HUMAN	601854981F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4074548 5'
8575	21114	34033	0.79	3.0E-02	BF333888.1	EST_HUMAN	IL5-HT0704-280800-108-c04 HT0704 Homo sapiens cDNA
8728	21267		1.77	3.0E-02	AF275654.1	NT	Omithorhynchus anatinus coagulation factor X mRNA, complete cds
10357	22851	35845	1.46	3.0E-02	AE001797.1	NT	Thermotoga maritima section 109 of 138 of the complete genome
10441	22835	35944	0.46	3.0E-02	Z21211.1	EST_HUMAN	HSAADTHS TEST1, Human adult Testis tissue Homo sapiens cDNA clone cam test244 (b)
11111	23821	36862	4.11	3.0E-02	M81357.1	NT	Human coagulation factor VII (F7) gene exon 1 and factor X (F10) gene, exon 1
11338	23986	37057	8.47	3.0E-02	AA483216.1	EST_HUMAN	ne87704.s1 NCL CGAP_Kid1 Homo sapiens cDNA clone IMAGE:911283
12043	25078	30515	2.56	3.0E-02	R32019.1	EST_HUMAN	yf63404.s1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:134407 3'
12417	24570		18.42	3.0E-02	AW895565.1	EST_HUMAN	QV4-NN0038-270400-187-h05 NN0038 Homo sapiens cDNA
12460	25069		3.53	3.0E-02	AF048687.1	NT	Rattus norvegicus UDP-Gal:glucosylceramide beta-1,4-galactosyltransferase mRNA, complete cds
2478	15467	27814	1.05	2.9E-02	AF228703.1	NT	Homo sapiens mitochondrial glutathione reductase and cytosolic glutathione reductase (GRD1) gene, complete cds, alternatively spliced
3021	15637	28114	1.11	2.8E-02	BE565644.1	EST_HUMAN	601338428F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3680895 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3021	15637	28115	1.11	2.9E-02	BE565844.1	EST_HUMAN	601338428F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3680695 5'
3616	16219	28698	0.64	2.9E-02	X55294.1	NT	Sheep gene for ultra high-sulphur keratin protein
4003	16601	29075	0.69	2.9E-02	H72805.1	EST_HUMAN	y007e10.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:233130 5'
5272	18016		62.38	2.9E-02	R09112.1	EST_HUMAN	y25c09.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:127888 5'
6213	18823	31594	1.31	2.9E-02	AF060221.1	NT	Sus scrofa deoxyribonuclease II mRNA, complete cds
6434	19037	31824	6.5	2.9E-02	BF032233.1	EST_HUMAN	601452861F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3856598 5'
7296	19824	32683	10.37	2.9E-02	BE271437.1	EST_HUMAN	601140728F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3049830 5'
7455	19979	32845	0.67	2.9E-02	D29214.1	EST_HUMAN	HUMINK262 Human epidermal keratinocyte Homo sapiens cDNA clone 262
7840	20482	33393	0.91	2.9E-02	AF129279.1	NT	Buchnera aphidicola natural-host Schlechtendalia chinensis gluconate-6-phosphate dehydrogenase (gnd) gene, partial cds
7940	20482	33394	0.91	2.9E-02	AF129279.1	NT	Buchnera aphidicola natural-host Schlechtendalia chinensis gluconate-6-phosphate dehydrogenase (gnd) gene, partial cds
9577	22077	35040	2.16	2.9E-02	AW875979.1	EST_HUMAN	CM3-PT0014-071299-051-c04 PT0014 Homo sapiens cDNA
9577	22077	35041	2.16	2.9E-02	AW875979.1	EST_HUMAN	CM3-PT0014-071299-051-c04 PT0014 Homo sapiens cDNA
9788	22286		0.59	2.9E-02	AW976597.1	EST_HUMAN	EST388706 MAGE resequences, MAGN Homo sapiens cDNA
10247	22742	35732	0.94	2.9E-02	AP000064.1	NT	Aeropyrum pernix genomic DNA, section 777
10925	16219	28698	1.73	2.9E-02	X55294.1	NT	Sheep gene for ultra high-sulphur keratin protein
12045	24979		1.88	2.9E-02	AU135817.1	EST_HUMAN	AU135817 PLACE1 Homo sapiens cDNA clone PLACE1002962 5'
591	13221		0.99	2.8E-02	AW970153.1	EST_HUMAN	EST382234 MAGE resequences, MAGK Homo sapiens cDNA
3414	16022	28502	1.62	2.8E-02	AF066063.1	NT	Homo sapiens retinal fascic (FSCN2) gene, exon 2
3414	16022	28503	1.62	2.8E-02	AF066063.1	NT	Homo sapiens retinal fascic (FSCN2) gene, exon 2
4401	16986		0.71	2.8E-02	8393751	NT	Rattus norvegicus microtubule-associated protein tau (Map1), mRNA
5337	17898	30313	0.92	2.8E-02	N87073.1	EST_HUMAN	L2083F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone L2083 5' similar to TRNA-GUANINE TRANSGLYCOSYLASE
5679	18306	30802	11.28	2.8E-02	BE741083.1	EST_HUMAN	601594078F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3948087 5'
6900	19634	32472	1.14	2.8E-02	T76960.1	EST_HUMAN	y21b08.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:108855 5'
8270	20811	33732	1.6	2.8E-02	AJ005820.1	NT	Craterosigma plantagineum mRNA for homeodomain leucine zipper protein (hb-1)
8947	21485	34407	0.74	2.8E-02	AA280762.1	EST_HUMAN	zs96c06.r1 NCJ CGAP GC81 Homo sapiens cDNA clone IMAGE:711466 5'
9135	21670	34612	0.91	2.8E-02	AF187872.1	NT	Cavia porcellus inwardly-rectifying potassium channel Kir2.1 (KCNJ2) gene, complete cds
9237	21763	34709	0.64	2.8E-02	AE001092.1	NT	Archaeoglobus fulgidus section 15 of 172 of the complete genome
10498	22892	36002	1.81	2.8E-02	BF527244.1	EST_HUMAN	602039477F2 NCI CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4177287 5'
3479	16085	28559	4.18	2.7E-02	AL161494.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 6
4280	16866	29312	1.91	2.7E-02	N47258.1	EST_HUMAN	y96h12.r1 Soares_multiple_sclerosis_2NBHMSP Homo sapiens cDNA clone IMAGE:280487 5'
4280	16866	29313	1.91	2.7E-02	N47258.1	EST_HUMAN	y96h12.r1 Soares_multiple_sclerosis_2NBHMSP Homo sapiens cDNA clone IMAGE:280487 5'

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5633	18262	30734	1.11	2.7E-02	R12245.1	EST_HUMAN	yf33d09.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:128657 5' similar to SP:JC2264 JC2264 TISSUE FACTOR PATHWAY INHIBITOR - RHESUS :
6061	18678	31420	0.7	2.7E-02	X61670.1	NT	T.aestivum pTTH20 mRNA for wheat type V thionin
6713	19307		0.9	2.7E-02	X97580.1	NT	A.bisporus pgkA gene
7127	19467	32285	2.06	2.7E-02	AA93571.1	EST_HUMAN	ab96f03.s1 Soares total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:1624661 3'
8295	20836		1.21	2.7E-02	A1377036.1	EST_HUMAN	tc28g08.x1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:2065982 3' similar to contains Alu repetitive element
597	13226	25700	1.52	2.6E-02	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21C082
2404	14972	27544	2.79	2.6E-02	AA490021.1	EST_HUMAN	ab02b02.s1 Strategene fetal retina 837202 Homo sapiens cDNA clone IMAGE:839595 3'
2408	14974	27546	7.33	2.6E-02	6754241	NT	Mus musculus histidine rich calcium binding protein (Hrc), mRNA
2406	14974	27547	7.33	2.6E-02	6754241	NT	Mus musculus histidine rich calcium binding protein (Hrc), mRNA
2940	15556		1.17	2.6E-02	AF109906.1	NT	Mus musculus MHC class III region RD gene, partial cds; B1, C2, G9A, NG22, G9, HSP70, HSP70, HSC70, and snRNP genes, complete cds; G7A gene, partial cds; and unknown genes
5031	17605	30049	4.74	2.6E-02	L12032.1	NT	Chicken dorsalin-1 mRNA, complete cds
5224	17789	30208	1.58	2.6E-02	AE002014.1	NT	Deinococcus radiodurans R1 section 151 of 229 of the complete chromosome 1
5254	17817	30241	2.34	2.6E-02	AW241154.1	EST_HUMAN	xa52b04.x1 NCI_CGAP_Sar4 Homo sapiens cDNA clone IMAGE:2570383 3' similar to SW:Y069_HUMAN Q15041 HYPOTHETICAL PROTEIN KIAA0069 :
6368	18972		6.32	2.6E-02	A1206030.1	EST_HUMAN	qg27111.x1 NCI_CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1762317 3'
6358	19154	31950	2.29	2.6E-02	BE621748.1	EST_HUMAN	6014934731 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3895578 3'
6915	19574	32402	0.75	2.6E-02	Z69064.1	NT	Vaccinia virus ORF1L, strain Wyeth
6915	19574	32403	0.75	2.6E-02	Z69064.1	NT	Vaccinia virus ORF1L, strain Wyeth
6990	19488	32310	6.45	2.6E-02	6981271	NT	Rattus norvegicus Nerve growth factor receptor, fast (Ngfr), mRNA
8442	20982	33897	0.77	2.6E-02	AA860948.1	EST_HUMAN	ak22704.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1408719 3'
9282	21882	34827	1.41	2.6E-02	11432020	NT	Homo sapiens KIAA1070 protein (KIAA1070), mRNA
9630	22130	35094	0.6	2.6E-02	AF114952.1	NT	Saccharomyces daltrenensis NRRL Y-12639(T) ATP synthase subunit 9 (ATP9) gene, mitochondrial gene encoding mitochondrial protein, complete cds
9630	22130	35095	0.6	2.6E-02	AF114952.1	NT	Saccharomyces daltrenensis NRRL Y-12639(T) ATP synthase subunit 9 (ATP9) gene, mitochondrial gene encoding mitochondrial protein, complete cds
10302	22796	35787	4.1	2.6E-02	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
11265	23763		2.44	2.6E-02	AA279351.1	EST_HUMAN	zs84402.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:704162 5'
11437	23887	36955	1.63	2.6E-02	AW500547.1	EST_HUMAN	UIHF-BND-ekj-e-10-0-UI.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3077466 5'
11965	25060	30512	1.26	2.6E-02	BF343827.1	EST_HUMAN	602015501F1 NCI_CGAP_Bm64 Homo sapiens cDNA clone IMAGE:4150944 5'
12083	24354		1.29	2.6E-02	11422936	NT	Homo sapiens hypothetical protein FLJ10724 (FLJ10724), mRNA
557	13188	25666	1.76	2.5E-02	A1793130.1	EST_HUMAN	on26f06.y6 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1557827 5'

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
557	13188	25667	1.76	2.5E-02	A1793130.1	EST_HUMAN	on26f06.y5 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1557827 5'
842	13458	25967	19.68	2.5E-02	BE974314.1	EST_HUMAN	601680305R2 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:3950865 3'
902	13516	26034	4.46	2.5E-02	BE974314.1	EST_HUMAN	601680305R2 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:3950865 3'
2791	15344		2.84	2.5E-02	U12571.1	NT	Rattus norvegicus rabphilin-3A mRNA, complete cds
2963	15599	26078	3.52	2.5E-02	X96967.1	NT	H. carterae mRNA for fucoxanthin chlorophyll a/c binding protein, Fcp1
2983	15599	26079	3.52	2.5E-02	X96967.1	NT	H. carterae mRNA for fucoxanthin chlorophyll a/c binding protein, Fcp1
4119	18005	29167	0.77	2.5E-02	BE701165.1	EST_HUMAN	PM2-NN0128-080700-001-a12 NN0128 Homo sapiens cDNA
4119	18005	29168	0.77	2.5E-02	BE701165.1	EST_HUMAN	PM2-NN0128-080700-001-a12 NN0128 Homo sapiens cDNA
4284	16870	28316	5.25	2.5E-02	AW592114.1	EST_HUMAN	tr36h08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2934015 3'
5889	18512	31238	0.7	2.5E-02	A1732776.1	EST_HUMAN	z63c10.x5 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:810354 3'
6340	18946		4.9	2.5E-02	BE670128.1	EST_HUMAN	7a30e09.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3284008 3' similar to contains L1.t1 L1 repetitive element
6357	18961		4.3	2.5E-02	BE746888.1	EST_HUMAN	601579393F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3928054 5'
6478	19079	31862	0.72	2.5E-02	L29029.1	NT	Chlamydomonas reinhardtii VSP-3 mRNA, complete cds
7860	20172	33058	1.52	2.5E-02	BF528722.1	EST_HUMAN	602070562F1 NCI_CGAP_Bm64 Homo sapiens cDNA clone IMAGE:4213406 5'
7860	20172	33059	1.52	2.5E-02	BF528722.1	EST_HUMAN	602070562F1 NCI_CGAP_Bm64 Homo sapiens cDNA clone IMAGE:4213406 5'
7920	20462	33368	0.48	2.5E-02	BE252469.1	EST_HUMAN	601108291F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3344278 5'
8759	21298	34219	0.93	2.5E-02	Q91713	SWISSPROT	CHORDIN PRECURSOR (ORGANIZER-SPECIFIC SECRETED DORSALIZING FACTOR)
8894	21432	34355	0.45	2.5E-02	AW025821.1	EST_HUMAN	wu08c10.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2516370 3'
9978	22473		0.6	2.5E-02	X71303.1	NT	D. radiicum 28S ribosomal RNA, D2 domain
10475	22969	35978	0.73	2.5E-02	A147615.1	EST_HUMAN	qb22a08.x1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:1686982 3'
10689	23219	36231	2.04	2.5E-02	Q10335	SWISSPROT	HYPOTHETICAL 46.7 KD PROTEIN C19G10.05 IN CHROMOSOME 1
10689	23219	36232	2.04	2.5E-02	Q10335	SWISSPROT	HYPOTHETICAL 46.7 KD PROTEIN C19G10.05 IN CHROMOSOME 1
10761	23285		4.04	2.5E-02	AF050157.1	NT	Mus musculus major histocompatibility locus class II region: major histocompatibility protein class II alpha chain (I-Aalpha) and major histocompatibility protein class II beta chain (I-Ebeta) genes, complete cds; butyrophilin-like (NG9), butyrophilin-like
11602	24045		1.73	2.5E-02	AB007546.1	NT	Homo sapiens gene for LECT2, complete cds
11922	24993		3.33	2.5E-02	11420078	NT	Homo sapiens similar to ALEX3 protein (H. sapiens) (LOC63634), mRNA
12115	24855		1.53	2.5E-02	11433220	NT	Homo sapiens mitogen-activated protein kinase kinase 13 (MAP3K13), mRNA
12215	24438		2.17	2.5E-02	U60169.1	NT	Dicotyledon discoidium putative protein kinase MkcA (mkcA) gene, complete cds
12242	24454	30957	1.31	2.5E-02	BE973327.1	EST_HUMAN	601652369R2 NIH_MGC_82 Homo sapiens cDNA clone IMAGE:3935513 3'
185	12846	25332	0.75	2.4E-02	A1378582.1	EST_HUMAN	tc72c07.x1 Soares_NbHMPu_S1 Homo sapiens cDNA clone IMAGE:2070156 3'
1642	14234	26768	2.09	2.4E-02	H65884.1	EST_HUMAN	y7511.1.1 Soares fetal liver spleen 1NFSL Homo sapiens cDNA clone IMAGE:211149 5'
2088	15457	27239	2.02	2.4E-02	P01901	SWISSPROT	H-2 CLASS I HISTOCOMPATIBILITY ANTIGEN, K-B ALPHA CHAIN PRECURSOR (H-2K(B))

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2088	15457	27240	2.02	2.4E-02	P01901	SWISSPROT	H-2 CLASS I HISTOCOMPATIBILITY ANTIGEN, K-B ALPHA CHAIN PRECURSOR (H-2K(B))
4458	17044	29487	1.89	2.4E-02	J05110.1	NT	T.thermophila calcium-binding 25 kDa (TCBP 25) protein mRNA, complete cds
4619	17202	28650	1.83	2.4E-02	P01901	SWISSPROT	H-2 CLASS I HISTOCOMPATIBILITY ANTIGEN, K-B ALPHA CHAIN PRECURSOR (H-2K(B))
4819	17202	28651	1.63	2.4E-02	P01901	SWISSPROT	H-2 CLASS I HISTOCOMPATIBILITY ANTIGEN, K-B ALPHA CHAIN PRECURSOR (H-2K(B))
6363	18967	31745	0.94	2.4E-02	W86680.1	EST_HUMAN	zh63h04.s1 Soares fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:416791 3'
7273	19801	32658	1.06	2.4E-02	Z20573.1	EST_HUMAN	HSAAACKVX.T, Human adult Rhabdomyosarcoma cell-line Homo sapiens cDNA
7287	19815	32672	0.95	2.4E-02	X12925.1	NT	Rat gene for uncoupling protein (UCP)
7287	19815	32673	0.95	2.4E-02	X12925.1	NT	Rat gene for uncoupling protein (UCP)
7831	20373		0.89	2.4E-02	AW813007.1	EST_HUMAN	RC3-ST0186-230300-019-h08 ST0186 Homo sapiens cDNA
7884	20426		0.6	2.4E-02	M16780.1	NT	Human retrolentospin 3' long terminal repeat
8379	20919		0.86	2.4E-02	H78378.1	EST_HUMAN	yu12c05.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:233576 3' similar to contains Alu repetitive element; contains A3R repetitive element ;
8468	21008	33925	10.74	2.4E-02	N69442.1	EST_HUMAN	ze35g11.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:294596 3' similar to
8917	21455	34375	0.54	2.4E-02	AE001126.1	NT	gbK02809RATSR7K Rat (rRNA); contains A3R.b1 A3R repetitive element ; Borrelia burgdorferi (section 11 of 70) of the complete genome
8939	21477	34398	0.75	2.4E-02	AA625660.1	EST_HUMAN	zu91c06.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:745354 3' similar to gb:J04422 ISLET XTR repetitive element ;
9720	22218	35193	2.76	2.4E-02	AV692954.1	EST_HUMAN	AMYLOID POLYPEPTIDE PRECURSOR (HUMAN); contains Alu repetitive element; contains element XTR
9891	22388	35366	2.9	2.4E-02	AA483894.1	EST_HUMAN	element; contains element PTR5 repetitive element ;
11447	23897	36962	1.9	2.4E-02	AF109905.1	NT	Mus musculus major histocompatibility locus class III regions Hsc70t gene, partial cds; smRNP, G7A, NG23, MuS homolog, CLCP, NG24, NG25, and NG28 genes, complete cds; and unknown genes
11447	23897	36963	1.9	2.4E-02	AF109905.1	NT	Mus musculus major histocompatibility locus class III regions Hsc70t gene, partial cds; smRNP, G7A, NG23, MuS homolog, CLCP, NG24, NG25, and NG28 genes, complete cds; and unknown genes
11718	24127		3.68	2.4E-02	9627809	NT	Bacteriophage bil67, complete genome
11868	24222	31044	2.48	2.4E-02	6753635	NT	Mus musculus DinB homolog 1 (E. coli) (Dinb1), mRNA
11924	24259	31013	1.36	2.4E-02	BE928869.1	EST_HUMAN	MIR0-FT0175-310800-202-a06 FTO175 Homo sapiens cDNA
11984	24294	30981	1.38	2.4E-02	U78187.1	NT	Rattus norvegicus cAMP-regulated guanine nucleotide exchange factor I (cAMP-GEFI) mRNA, complete cds
11984	24294	31025	1.38	2.4E-02	U78187.1	NT	Rattus norvegicus cAMP-regulated guanine nucleotide exchange factor I (cAMP-GEFI) mRNA, complete cds

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
12164	24404		8.87	2.4E-02	AB008569.1	NT	Caenorhabditis elegans mRNA for iron-sulfur subunit of mitochondrial succinate dehydrogenase, complete cds
12191	24422		2.11	2.4E-02	N42980.1	EST_HUMAN	Y08a06.r1 Soares melanocyte 2NBHM Homo sapiens cDNA clone IMAGE:270610 5'
12197	24425		1.55	2.4E-02	BF679477.1	EST_HUMAN	602153281F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4294173 5'
12362	24827	30795	1.48	2.4E-02	AA179693.1	EST_HUMAN	zp13h01.r1 Strategene fetal retina 937202 Homo sapiens cDNA clone IMAGE:609361 5'
1913	14498		5.46	2.3E-02	W05340.1	EST_HUMAN	za84g08.r1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:299294 5'
1931	14515		21.66	2.3E-02	U84165.1	NT	4 Homo sapiens mammary tumor-associated protein INT6 (INT6) gene, exon 4
2053	14634	27205	0.96	2.3E-02	AW797355.1	EST_HUMAN	CM2-UM0038-290400-172-b11 UM0038 Homo sapiens cDNA
2389	14957	27529	2.31	2.3E-02	Z74293.1	NT	S.cerevisiae chromosome IV reading frame ORF YDL245c
3745	16346	28814	6.21	2.3E-02	Z20377.1	EST_HUMAN	HSAAACADH P. Human foetal Brain Whole tissue Homo sapiens cDNA
3777	16377		0.82	2.3E-02	L23429.1	NT	Canis beta-galactosides-binding lectin (LGALS3) mRNA, 3'end
4230	16818	29265	0.75	2.3E-02	L24799.1	NT	Gallus gallus connexin 45.6 (Cx45.6) gene, complete cds
4230	16818	29267	0.75	2.3E-02	L24799.1	NT	Gallus gallus connexin 45.6 (Cx45.6) gene, complete cds
4511	17095	29542	1.21	2.3E-02	AW899107.1	EST_HUMAN	CM4-NN0080-290400-160-b04 NN0080 Homo sapiens cDNA
4546	17130	29574	0.91	2.3E-02	BE935225.1	EST_HUMAN	CM3-MT0118-010900-318-g07 MT0118 Homo sapiens cDNA
4546	17130	29575	0.91	2.3E-02	BE935225.1	EST_HUMAN	CM3-MT0118-010900-318-g07 MT0118 Homo sapiens cDNA
4547	18006	29576	1.05	2.3E-02	AW593693.1	EST_HUMAN	xs25d08.x1 NCI_CGAP_U12 Homo sapiens cDNA clone IMAGE:2770671 3'
4547	18006	29577	1.05	2.3E-02	AW593693.1	EST_HUMAN	xs25d08.x1 NCI_CGAP_U12 Homo sapiens cDNA clone IMAGE:2770671 3'
4698	17280	29726	2.96	2.3E-02	BF026487.1	EST_HUMAN	601872279F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3955386 5'
4698	17280	29727	2.96	2.3E-02	BF026487.1	EST_HUMAN	601872279F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3955386 5'
5182	17748	30177	0.93	2.3E-02	AW844307.1	EST_HUMAN	RC2-CN0051-290100-011-a07 CN0051 Homo sapiens cDNA
5368	17928	30342	2.72	2.3E-02	A1038076.1	EST_HUMAN	α21c10.x1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1656978 3' similar to gb.X69608_rna1 ATP SYNTHASE LIPID-BINDING PROTEIN P2 PRECURSOR (HUMAN);
5578	18209	30859	3.34	2.3E-02	U86303.1	NT	Caulobacter crescentus topoisomerase IV ParE subunit (parE) gene, complete cds, and propionyl-CoA carboxylase beta chain (pccB) homolog gene, partial cds
6733	19327	32132	4.43	2.3E-02	AL161505.2	NT	A-rabidopsis thaliana DNA chromosome 4, contig fragment No. 17
7056	18075	30428	0.88	2.3E-02	BE141475.1	EST_HUMAN	MRO-HT0080-011099-002-c09 HT0080 Homo sapiens cDNA
7817	20360	32266	6	2.3E-02	U63610.1	NT	Human plectin (PLEC1) gene, exons 3-32, and complete cds
8407	20947	33867	0.74	2.3E-02	AJ298105.1	NT	Homo sapiens PDX1 gene for lipoyl-containing component X, exons 1-11
8407	20947	33868	0.74	2.3E-02	AJ298105.1	NT	Homo sapiens PDX1 gene for lipoyl-containing component X, exons 1-11
8630	21169	34085	0.83	2.3E-02	AI885380.1	EST_HUMAN	wa76h10.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2302147 3'
8630	21169	34086	0.83	2.3E-02	AI885380.1	EST_HUMAN	wa76h10.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2302147 3'
9065	21602	34532	0.81	2.3E-02	P41966	SWISSPROT	HYPOTHETICAL 55.6 KD PROTEIN B0280.5 IN CHROMOSOME III PRECURSOR
8773	22271	35256	0.72	2.3E-02	P50532	SWISSPROT	CHROMOSOME ASSEMBLY PROTEIN XCAP-C



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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9843	22438	35415	1.4	2.3E-02	AE000198.1	NT	Escherichia coli K-12 MG1685 section 89 of 400 of the complete genome
9843	22438	35416	1.4	2.3E-02	AE000199.1	NT	Escherichia coli K-12 MG1685 section 89 of 400 of the complete genome
10661	23193	36208	2.37	2.3E-02	P08640	SWISSPROT	GLUCOAMYLASE S1/S2 PRECURSOR (GLUCAN 1,4-ALPHA-GLUCOSIDASE) (1,4-ALPHA-D-GLUCAN GLUCOHYDROLASE)
11628	24070		1.67	2.3E-02	AF159132.1	NT	Metapneus ensis fushi tarazu-factor 1 mRNA, complete cds
11846	24843		5.2	2.3E-02	BE278331.1	EST_HUMAN	601178958F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3546567 5'
12282	24485	30940	1.59	2.3E-02	BF528462.1	EST_HUMAN	602043629F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4181454 5'
12282	24485	30941	1.59	2.3E-02	BF528462.1	EST_HUMAN	602043629F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4181454 5'
12392	24552	30907	2.2	2.3E-02	U39394.1	NT	Streptomyces sp. alpha-1,3/4-fucosidase precursor gene, complete cds
12447	25100		3.04	2.3E-02	U11077.1	NT	Dictyostelium discoideum extracellular signal-regulated protein kinase (ERK1) mRNA, complete cds
12660	24940		1.73	2.3E-02	11426388	NT	Homo sapiens dead finger (Drosophila)-like 1 (DRIL1), mRNA
767	13386	25885	3	2.2E-02	AF018287.1	NT	Columbia livia nucleoside diphosphate kinase (NDPK) gene, nuclear gene encoding mitochondrial protein, complete cds
1783	14373		1.03	2.2E-02	4557448	NT	Homo sapiens chromodomain helicase DNA binding protein 2 (CHD2) mRNA
2059	14639	27212	1.33	2.2E-02	Z82001.1	NT	S pneumoniae pcpA gene and open reading frames
3482	16088		2.1	2.2E-02	AA577785.1	EST_HUMAN	nm24a04.s1 NCI_CGAP_Gas1 Homo sapiens cDNA clone IMAGE:1084782 3'
3708	16309		3.56	2.2E-02	AF083094.1	NT	Infectious bursal disease virus segment B strain IL4 VP1 gene, complete cds
3920	16518	28984	1.11	2.2E-02	AW601317.1	EST_HUMAN	PMO-BT0340-170100-004-b03 BT0340 Homo sapiens cDNA
3992	16590	29062	0.85	2.2E-02	Z74293.1	NT	S cerevisiae chromosome IV reading frame ORF YDL245c
5225	17790	30209	0.92	2.2E-02	Z73597.1	NT	S cerevisiae chromosome XVI reading frame ORF YPL241c
7284	19822	32681	3.52	2.2E-02	AV699721.1	EST_HUMAN	AV699721 GKB Homo sapiens cDNA clone GKBAND03 3'
8312	20853	33778	2.56	2.2E-02	AL161515.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 27
8312	20853	33779	2.56	2.2E-02	AL161515.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 27
8744	21283	34205	0.75	2.2E-02	X79468.1	NT	P. vulgata alpha tub 2 mRNA
9574	22074	35036	0.57	2.2E-02	AJ243025.1	NT	Mus musculus partial FBPaase 2 gene for Fructose-1,6-bisphosphatase, exon 5 and intron 5
9574	22074	35037	0.57	2.2E-02	AJ243025.1	NT	Mus musculus partial FBPaase 2 gene for Fructose-1,6-bisphosphatase, exon 5 and intron 5
9604	22104	35066	1.88	2.2E-02	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
9604	22104	35067	1.88	2.2E-02	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
10106	22601		0.86	2.2E-02	6878140	NT	Mus musculus Sjogren syndrome antigen A1 (Ssa1), mRNA
12120	24379		3.85	2.2E-02	AA503553.1	EST_HUMAN	ne47n07.s1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:800541 3' similar to contains Alu repetitive element;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
444	13077		4.45	2.1E-02	AV761502.1	EST_HUMAN	AV761502 MDS Homo sapiens cDNA clone MDSADG01 5'
474	13107		5.21	2.1E-02	AF029726.1	NT	Dichytetium discoidium histidine kinase C (dhkC) mRNA, complete cds
1306	13900	26420	8.15	2.1E-02	U72073.1	NT	Bacillus subtilis cotKLM cluster, CotK (cotK), CotL (cotL), and spore coat protein CotM (cotM) genes, complete cds
1430	14022	26550	1.46	2.1E-02	AF204395.1	NT	Mus musculus macrophage migration inhibitory factor (MIF) gene, 5' flanking region and partial cds
1430	14022	26551	1.46	2.1E-02	AF204395.1	NT	Mus musculus macrophage migration inhibitory factor (MIF) gene, 5' flanking region and partial cds
2842	13429	25934	3.37	2.1E-02	N29266.1	EST_HUMAN	yx43h07.r1 Soares melanocyte 2NBHM Homo sapiens cDNA clone IMAGE:264541 5'
3184	14660	27231	0.93	2.1E-02	BE072546.1	EST_HUMAN	PM2-BT0546-120100-001-111 BT0546 Homo sapiens cDNA
3184	14660	27232	0.93	2.1E-02	BE072546.1	EST_HUMAN	PM2-BT0546-120100-001-111 BT0546 Homo sapiens cDNA
3643	16246	28721	1.47	2.1E-02	AA461271.1	EST_HUMAN	z63b09.r1 Soares, total, fetus, Nb2HF8, 9w Homo sapiens cDNA clone IMAGE:796121 5'
4211	16800	29249	0.77	2.1E-02	Z74293.1	NT	S. cerevisiae chromosome IV reading frame ORF YDL245c
4398	16983	29428	0.83	2.1E-02	BF343655.1	EST_HUMAN	602015306F1 NCI_CGAP_Bim64 Homo sapiens cDNA clone IMAGE:4151161 5'
4540	17124	29569	1.84	2.1E-02	U44914.1	NT	Borrelia burgdorferi plasmid cp32-2, erpC and erpD genes, complete cds; and unknown genes
4552	17135	29583	1.3	2.1E-02	AJ768127.1	EST_HUMAN	wg81d11.x1 Soares, NSF, F8, 9w, OT, PA, P, S1 Homo sapiens cDNA clone IMAGE:2371509 3'
4820	17398	29852	5.95	2.1E-02	Y08501.1	NT	A. thaliana mitochondrial genome, part A
4836	17414	29867	0.57	2.1E-02	AA665737.1	EST_HUMAN	eg55g12.s1 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:1126918 3'
4944	17519	29861	0.63	2.1E-02	A1823432.1	EST_HUMAN	wh54a05.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2384528 3'
5321	17883		1.52	2.1E-02	S82470.1	NT	BB1-malignant cell expression-enhanced gene/tumor progression-enhanced gene [human, UM-UC-9 bladder carcinoma cell line, mRNA, 1897 nt]
5821	18445	31167	0.8	2.1E-02	AW379529.1	EST_HUMAN	CN4-HT0244-111199-040-005 HT0244 Homo sapiens cDNA
7126	19466	32284	0.74	2.1E-02	BF066199.1	EST_HUMAN	QV3-GN0058-120900-329-at2 GN0058 Homo sapiens cDNA
8456	20896	33914	0.68	2.1E-02	9790238	NT	Mus musculus sorting nexin 1 (Snx1), mRNA
9422	21931	34879	0.56	2.1E-02	AA984288.1	EST_HUMAN	am83e07.s1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:1629732 3' similar to contains
9549	22049	35010	2.41	2.1E-02	AJ243213.1	NT	Alu repetitive element; contains element MER11 repetitive element;
9549	22049	35011	2.41	2.1E-02	AJ243213.1	NT	Homo sapiens partial 5-HT4 receptor gene, exons 2 to 5
9894	22391	35369	1.22	2.1E-02	L26324.1	NT	Homo sapiens partial 5-HT4 receptor gene, exons 2 to 5
9973	22468	35452	0.57	2.1E-02	AA984288.1	EST_HUMAN	Streptococcus pneumoniae integrase, excisionase, repressor protein, relaxase, UmuC MucB homolog, and UmuD MucA homolog genes, complete cds; and unknown genes
12099	18030		11.53	2.1E-02	Y19213.1	NT	am83e07.s1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:1629732 3' similar to contains
12141	24839	30798	1.31	2.1E-02	L34170.1	NT	Alu repetitive element; contains element MER11 repetitive element;
12552	24655	30871	16.83	2.1E-02	AF183913.1	NT	Homo sapiens putative psfHbA pseudogene for hair keratin, exons 2 to 7
						NT	Human germline UBE1L gene similar to the gene for ubiquitin-activating enzyme, exons 1-22
						NT	Azospirillum brasilense major outer membrane protein OmaA precursor (omaA) gene, complete cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
20	12699	25155	1.34	2.0E-02	BF002932.1	EST_HUMAN	7g51c08.x1 NCI_CGAP_P128 Homo sapiens cDNA clone IMAGE:3309988 3' similar to contains MER1.13
21	12700	25156	9.6	2.0E-02	AW895665.1	EST_HUMAN	MER1 repetitive element:
280	12837	25422	2.31	2.0E-02	6753635	NT	QV4-NN0038-270400-187-h05 NN0038 Homo sapiens cDNA
317	12971	25460	2.42	2.0E-02	AA456538.1	EST_HUMAN	Mus musculus DinB homolog 1 (E. coli) (Dinb1), mRNA
831	13448	25955	1.2	2.0E-02	6753635	NT	aa15b10.1 Soares NIHMPu_S1 Homo sapiens cDNA clone IMAGE:813307 5'
1128	13729	26240	1.32	2.0E-02	AL096805.1	NT	Mus musculus DinB homolog 1 (E. coli) (Dinb1), mRNA
1241	13839	26356	0.79	2.0E-02	8922391	NT	Homo sapiens genomic region containing hypervariable minisatellites chromosome 1[1p36.33] of Homo sapiens
1241	13839	26357	0.79	2.0E-02	8922391	NT	Homo sapiens hypothetical protein FLJ10379 (FLJ10379), mRNA
1914	14499	27053	2.3	2.0E-02	8922453	NT	Homo sapiens hypothetical protein FLJ10488 (FLJ10488), mRNA
1914	14499	27054	2.3	2.0E-02	8922453	NT	Homo sapiens hypothetical protein FLJ10488 (FLJ10488), mRNA
2824	15376		3.19	2.0E-02	AL181532.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 32
3115	12699	25155	1.84	2.0E-02	BF002932.1	EST_HUMAN	7g51c08.x1 NCI_CGAP_P128 Homo sapiens cDNA clone IMAGE:3309988 3' similar to contains MER1.13
3178	15791		1.38	2.0E-02	7305474	NT	MER1 repetitive element:
3264	15878		1.57	2.0E-02	AF095588.1	NT	Mus musculus sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6B (Sema6b), mRNA
4078	16874	29135	1.54	2.0E-02	AF18035.1	NT	Arabidopsis thaliana C2H2 zinc finger protein FZF mRNA, complete cds
5268	17830	30255	1.12	2.0E-02	AF183368.1	NT	P. vulgaris hydroxyproline-rich glycoprotein (HRGP) mRNA, 3' end
6058	18673	31414	0.87	2.0E-02	L35321.2	NT	Ajellomyces capsulatus catalase isozyme A (CATA) mRNA, complete cds
7553	20072	32947	1.26	2.0E-02	AP000004.1	NT	Dicystostium discoidaeum class VII unconventional myosin (myoI) gene, complete cds
7553	20072	32948	1.26	2.0E-02	AP000004.1	NT	Pyrococcus horikoshii OT3 genomic DNA, 777001-994000 nt. position (4/7)
9791	22289		2.5	2.0E-02	U70408.1	NT	Pyrococcus horikoshii OT3 genomic DNA, 777001-994000 nt. position (4/7)
10264	22759	35746	1.63	2.0E-02	AF040342.1	EST_HUMAN	Japanese encephalitis virus envelope protein mRNA, partial cds
10522	23060	36070	2.05	2.0E-02	Z73968.1	NT	wa17b02.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2288315 3'
11250	23780	36836	2.85	2.0E-02	D88184.1	NT	Mycobacterium tuberculosis H37Rv complete genome, segment 83/162
11530	23978	37047	1.58	2.0E-02	10947055	NT	Equus caballus DNA for 17alpha-hydroxylase/17,20-lyase, complete cds
11530	23978	37048	1.58	2.0E-02	10947055	NT	Homo sapiens ankyrin 3, node of Ranvier (ankyrin G) (ANK3), transcript variant 1, mRNA
11654	18034	30494	1.91	2.0E-02	AA456538.1	EST_HUMAN	Homo sapiens ankyrin 3, node of Ranvier (ankyrin G) (ANK3), transcript variant 1, mRNA
12138	15376		1.94	2.0E-02	AL181532.2	NT	aa15b10.1 Soares NIHMPu_S1 Homo sapiens cDNA clone IMAGE:813307 5'
12635	24711		8.4	2.0E-02	T80037.1	EST_HUMAN	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 32
722	13342	25832	1.93	1.9E-02	AA572764.1	EST_HUMAN	jd04c08.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:24875 5'
							mf19a07.s1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:814196 similar to contains L1.11 L1 repetitive element:

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1658	14251	26785	0.96	1.9E-02	P18488	SWISSPROT	EMPTY SPIRACLES HOMEOTIC PROTEIN
2083	14664	27234	1.96	1.9E-02	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
2083	14664	27235	1.96	1.9E-02	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
2549	15113	27683	0.9	1.9E-02	AL161550.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 50
2930	15548	28021	8.7	1.9E-02	AA713856.1	EST_HUMAN	nm04f05.s1 NCI_CGAP_SS1 Homo sapiens cDNA clone IMAGE:1238337 3'
2980	15596	28076	1.56	1.9E-02	AV648668.1	EST_HUMAN	AV648668 GLC Homo sapiens cDNA clone GLOBLH07 3'
3298	15909		0.75	1.9E-02	AB033611.1	NT	Utrichus talpoides mitochondrial gene for cytochrome b, complete cds
3671	16272		1.09	1.9E-02	N52250.1	EST_HUMAN	yz28b02.s1 Soares multiple_sclerosis_2NbrHMP Homo sapiens cDNA clone IMAGE:284331 3'
3766	16387		6.81	1.9E-02	BE738088.1	EST_HUMAN	60157268ZF1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3839564 5'
4121	16714	29170	1.48	1.9E-02	AF141940.1	NT	Mycoplasma imlans VihA1 precursor (vihA1) and VihA2 precursor (vihA2) genes, partial cds
4271	16857	29305	1.57	1.9E-02	P09081	SWISSPROT	HOMEOTIC BICOID PROTEIN (PRD-4)
4271	16857	29308	1.57	1.9E-02	P09081	SWISSPROT	HOMEOTIC BICOID PROTEIN (PRD-4)
4639	17221	29875	3.21	1.9E-02	AI452999.1	EST_HUMAN	tt46d04.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2144551 3' similar to contains Alu repetitive element;
5157	15113	27683	2.73	1.9E-02	AL161550.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 50
5519	18151	30565	0.83	1.9E-02	AF037352.1	NT	Mus musculus T cell receptor gamma locus, TCR gamma 1 and gamma 3 gene clusters
5660	18287	30765	1.38	1.9E-02	L47572.1	NT	Meleagris gallopavo paraoxonase-2 (PON2) mRNA, complete cds
5959	18581		0.81	1.9E-02	AB078507.1	NT	Drosophila kaneko gene for glycerol-3-phosphate dehydrogenase, complete cds
7158	19690	32534	1.41	1.9E-02	U19241.1	NT	Homo sapiens interferon-gamma receptor alpha chain gene, exon 1
7158	19690	32535	1.41	1.9E-02	U19241.1	NT	Homo sapiens interferon-gamma receptor alpha chain gene, exon 1
8506	21045		1.06	1.9E-02	AL162754.2	NT	Neisseria meningitidis serogroup A strain Z2491 complete genome, segment 3/7
9254	21780	34732	0.94	1.9E-02	BF316129.1	EST_HUMAN	601896130F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4125462 5'
9629	22129	35093	0.66	1.9E-02	L10114.1	NT	Nicotiana tabacum type II phytochrome (phyB) gene, complete cds
9958	22453	35435	1.04	1.9E-02	BF695832.1	EST_HUMAN	601852385F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4076253 5'
10054	22549	35543	0.49	1.9E-02	N39160.1	EST_HUMAN	yy46h08.s1 Soares multiple_sclerosis_2NbrHMP Homo sapiens cDNA clone IMAGE:276639 3'
10151	22646	35639	0.56	1.9E-02	D64001.1	NT	Synechocystis sp. PCC6803 complete genome, 20/27, 2539000-2644794
11878	24847	30801	4.29	1.9E-02	AF101065.1	NT	Hirudo medicinalis intermediate filament glijarin mRNA, complete cds
12477	24818		1.27	1.9E-02	L11068.1	NT	Candida albicans lambda Ca3/B fragment
12587	24680	30879	1.7	1.9E-02	X68271.1	NT	H. sapiens MUC18 gene exon 16
368	13017	25500	1.84	1.8E-02	AW771104.1	EST_HUMAN	hn52c06.x1 NCI_CGAP_Co17 Homo sapiens cDNA clone IMAGE:3027274 3' similar to contains element
714	13335	25821	2.26	1.8E-02	BF308122.1	EST_HUMAN	MER29 repetitive element
1202	13802	26315	1.51	1.8E-02	X17664.1	NT	601894329F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4139983 5'
1484	14077	26615	2.3	1.8E-02	AF243382.1	NT	H. francisci mRNA for myelin basic protein (MBP)
							Drosophila melanogaster cytoplasmic protein encore (enc) mRNA, complete cds

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2704	15281	27828	1.22	1.8E-02	AE004544.1	NT	Pseudomonas aeruginosa PA01, section 105 of 529 of the complete genome
3247	15859		0.72	1.8E-02	AI805828.1	EST_HUMAN	hs25a09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2090286 3'
3956	16554	28023	1.07	1.8E-02	AW879122.1	EST_HUMAN	MR1-OT0011-280300-009-g04 OT0011 Homo sapiens cDNA
3956	16554	28024	1.07	1.8E-02	AW879122.1	EST_HUMAN	MR1-OT0011-280300-009-g04 OT0011 Homo sapiens cDNA
4160	16752		1.41	1.8E-02	AA861446.1	EST_HUMAN	ak24h04.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1408935 3'
4521	17105	29551	1.87	1.8E-02	AW933633.1	EST_HUMAN	QV4-DT0021-301289-071-b11 DT0021 Homo sapiens cDNA
5090	17683	30103	1.06	1.8E-02	O60810	SWISSPROT	HYPOTHETICAL PROTEIN D.J845024.2
6901	19635	32473	4.27	1.8E-02	P14310	SWISSPROT	HYPOTHETICAL 7.9 KD PROTEIN IN FIXW 5'REGION
8071	20613	33527	0.81	1.8E-02	U37091.1	NT	Mus musculus carbonic anhydrase IV gene, complete cds
8404	20944	33868	0.91	1.8E-02	AW903327.1	EST_HUMAN	QV2-NN1073-220400-159-h09 NN1073 Homo sapiens cDNA
8449	20889	33907	0.75	1.8E-02	6678943	NT	Mus musculus microtubule-associated protein 2 (Map2), mRNA
8413	21922	34870	0.45	1.8E-02	BF241924.1	EST_HUMAN	801877026F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4105303 5'
8413	21922	34871	0.45	1.8E-02	BF241924.1	EST_HUMAN	801877026F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4105303 5'
9560	22060		2.41	1.8E-02	AA897543.1	EST_HUMAN	af209.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1394921 3' similar to gb.L11672 ZINC FINGER PROTEIN 91 (HUMAN);
9975	22470	35453	1.72	1.8E-02	BE778274.1	EST_HUMAN	601483545F1 NIH_MGC_87 Homo sapiens cDNA clone IMAGE:3866063 5'
10128	22621	35611	1.12	1.8E-02	X98633.1	NT	L. stagnalis mRNA for myomodulin neuropeptide precursor
11313	23011	36019	1.79	1.8E-02	AB002337.2	NT	Homo sapiens mRNA for KIAA0339 protein, partial cds
11313	23011	36020	1.79	1.8E-02	AB002337.2	NT	Homo sapiens mRNA for KIAA0339 protein, partial cds
11480	23930	37001	1.73	1.8E-02	AF000006.1	NT	Pyrococcus horikoshii OT3 genomic DNA, 1168001-1485000 nt, position (8/7)
11488	23938	37008	3.88	1.8E-02	U62749.1	NT	Zea mays acidic ribosomal protein P2a-3 (pp2a-3) mRNA, partial cds
939	13552	28068	0.77	1.7E-02	BE394869.1	EST_HUMAN	601310826F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3632180 5'
1827	14418	26963	1.89	1.7E-02	AW573183.1	EST_HUMAN	h34a03.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2833740 3' similar to contains L1.11 L1 repetitive element;
1827	14416	26964	1.89	1.7E-02	AW573183.1	EST_HUMAN	h34a03.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2833740 3' similar to contains L1.11 L1 repetitive element;
1912	14497		3.27	1.7E-02	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
2159	14736		12.81	1.7E-02	AB004816.1	NT	Oryctolagus cuniculus mRNA for mitsugumin29, complete cds
2332	14903	27474	4.64	1.7E-02	S74186.1	NT	[microsatellite INRA41] [Ovis aries=sheep, Genomic, 391 nt, segment 1 of 2]
3028	15644	28123	0.84	1.7E-02	AI147615.1	EST_HUMAN	qb22a08.x1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:1686982 3'
3562	16166		4.33	1.7E-02	AW827368.1	EST_HUMAN	hm45a04.x1 NCI_CGAP_RDF1 Homo sapiens cDNA clone IMAGE:3015534 3' similar to contains MER19.b1 MER19 repetitive element;
3687	18288		0.65	1.7E-02	P04929	SWISSPROT	HISTIDINE-RICH GLYCOPROTEIN PRECURSOR

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4248	16836		1.08	1.7E-02	AA689618.1	EST_HUMAN	ac19f04.s1 Stratagene ovary (#937217) Homo sapiens cDNA clone IMAGE:856927 3' similar to contains Alu repetitive element; contains element MER24 repetitive element ;
4278	16864		2.52	1.7E-02	R02508.1	EST_HUMAN	ye85f08.r1 Soares fetal liver spleen 1NfLS Homo sapiens cDNA clone IMAGE:124647 5'
4551	17134	29582	0.61	1.7E-02	A1305279.1	EST_HUMAN	qm08g07.x1 NCL CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1881276 3' similar to gb:X52359 ZINC FINGER PROTEIN 30 (HUMAN);
4826	17209	28659	1.44	1.7E-02	AW573183.1	EST_HUMAN	hf34a03.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2933740 3' similar to contains L1.11 L1 repetitive element ;
4824	17402	29855	1.78	1.7E-02	V00641.1	NT	Messenger RNA for anglerfish (Lophius americanus) somatostatin II
4936	17511		5.59	1.7E-02	A1015076.1	EST_HUMAN	ov51a02.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1640858 3'
6274	18892	31650	1.8	1.7E-02	A1789247.1	EST_HUMAN	wg35f09.x1 Soares_NSF_F8_gw_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2367113 3' similar to contains Alu repetitive element;
6693	19289	32091	1.98	1.7E-02	A1038280.1	EST_HUMAN	ov85h03.x1 Soares_fetal_liver_spleen_1NfLS_S1 Homo sapiens cDNA clone IMAGE:1672661 3'
7112	19452	32268	1.05	1.7E-02	AF190930.1	NT	Macaca fascicularis protein tyrosine phosphatase (PRL-1) mRNA, complete cds
7255	19783	32639	1.96	1.7E-02	8400718	NT	Homo sapiens nebulin (NEB), mRNA
7394	19919	32783	1.07	1.7E-02	L07899.1	NT	Human apolipoprotein (a) gene, exon 1
7394	19919	32784	1.07	1.7E-02	L07899.1	NT	Human apolipoprotein (a) gene, exon 1
7724	20232		1.7	1.7E-02	AJ010770.1	NT	Homo sapiens hyperion gene, exons 1-50
8357	20296	33195	0.97	1.7E-02	U21854.1	NT	Caenorhabditis elegans cCAF-1 protein gene, complete cds
9615	22115	33079	1.31	1.7E-02	AL040554.1	EST_HUMAN	DKFZp4340314_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp4340314 5'
12462	25025	30619	3.35	1.7E-02	AW603482.1	EST_HUMAN	CM4-NN1030-040400-130-f08 NN1030 Homo sapiens cDNA
537	13168		3.38	1.6E-02	AL021829.1	NT	Mycobacterium tuberculosis H37Rv complete genome; segment 13/162
1696	14289	26825	1.05	1.6E-02	Y18889.1	NT	Treponema maltophilum flaB2, flaB3 and flilD genes for flagellin subunit proteins and CAP protein homologue
2290	14884	27438	2.13	1.6E-02	Q64176	SWISSPROT	LIVER CARBOXYLESTERASE 22 PRECURSOR (EGASYN) (ESTERASE-22)
2290	14884	27439	2.13	1.6E-02	Q64176	SWISSPROT	LIVER CARBOXYLESTERASE 22 PRECURSOR (EGASYN) (ESTERASE-22)
2600	15162	27730	0.98	1.6E-02	AJ006345.1	NT	Homo sapiens KVLQT1 gene
2669	15227	27799	1.82	1.6E-02	AA484872.1	EST_HUMAN	ne81d06.s1 NCL CGAP_Ew1 Homo sapiens cDNA clone IMAGE:910667
2718	15275		1.14	1.6E-02	AB014534.1	NT	Homo sapiens mRNA for KIAA0634 protein, partial cds
3052	15668	28148	0.73	1.6E-02	AF112282.1	NT	Lasaea sp. isolate IBd cytochrome oxidase III gene, partial cds; mitochondrial gene for mitochondrial product
3578	16182	28664	5.61	1.6E-02	AW850652.1	EST_HUMAN	IL3-CT0219-160200-063-C07 CT0219 Homo sapiens cDNA
3914	16512	28974	0.62	1.6E-02	AL163301.2	NT	Homo sapiens chromosome 21 segment HS21C101

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4254	16842		1.77	1.6E-02	AF110520.1	NT	Mus musculus major histocompatibility complex region NG27, NG28, RPS28, NADH oxidoreductase, NG29, KIFC1, Fas-binding protein, BING1, tapasin, RalGDS-like, KE2, BING4, beta 1,3-galactosyl transferase, and RPS18 genes, complete cds; Secm21 gene, partial>
4388	16874	28424	1.26	1.6E-02	AW875407.1	EST_HUMAN	
4901	17476	29932	3.98	1.6E-02	AI769132.1	EST_HUMAN	
5308	17888		0.61	1.6E-02	N80156.1	EST_HUMAN	wg34b09.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2366969 3'
5807	18432	31153	1.26	1.6E-02	6871715	NT	zaf5e07.s1 Soares fetal liver spleen 1NfLS Homo sapiens cDNA clone IMAGE:287444 3'
8752	18346	32152	2	1.6E-02	AB015281.1	NT	Mus musculus CD5 antigen (Cd5), mRNA
7011	19509	32329	1.22	1.6E-02	AB027571.1	NT	Candida albicans CaGCR3 gene, complete cds
7011	19509	32330	1.22	1.6E-02	AB027571.1	NT	Saccharomyces cerevisiae CAD2 gene for cadmium resistance protein, complete cds
7011	19509	32330	1.22	1.6E-02	AB027571.1	NT	Saccharomyces cerevisiae CAD2 gene for cadmium resistance protein, complete cds
7696	20205	33092	0.9	1.6E-02	AL161508.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 20
8064	20606	33518	0.78	1.6E-02	AJ277682.1	NT	Homo sapiens partial TUB gene for tubby (mouse) homolog and LMO1 gene for LIM domain only 1 protein
8119	20660		1.55	1.6E-02	X05151.1	NT	Human apoC-II gene for preproapolipoprotein C-II
9953	22448		2.32	1.6E-02	AF078784.1	NT	Drosophila melanogaster enhancer of polycomb (E(Pc)) mRNA, complete cds
10317	22811	35805	1.17	1.6E-02	AA572818.1	EST_HUMAN	nt19g03.s1 NCI_CGAP_P11 Homo sapiens cDNA clone IMAGE:914260 similar to SW:TELO_RABIT
10317	22811	35806	1.17	1.6E-02	AA572818.1	EST_HUMAN	P28294 TELOKIN. [1];
10788	24900	36319	2.38	1.6E-02	Z94928.1	NT	G.gallus microsatellite DNA (LEI0260 (=T1611E11))
11090	23602	36840	2.5	1.6E-02	AL161508.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 20
11090	23602	36841	2.5	1.6E-02	AL161508.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 20
11385	23837	36899	2.38	1.6E-02	AI373558.1	EST_HUMAN	q286e10.x1 Soares_pregnant uterus_NbHPU Homo sapiens cDNA clone IMAGE:2042442 3'
11855	14864	27438	3.63	1.6E-02	Q64176	SWISSPROT	LIVER CARBOXYLESTERASE 22 PRECURSOR (EGASYN) (ESTERASE-22)
11855	14864	27439	3.63	1.6E-02	Q64176	SWISSPROT	LIVER CARBOXYLESTERASE 22 PRECURSOR (EGASYN) (ESTERASE-22)
781	13400		51.07	1.5E-02	8923734	NT	Homo sapiens transcription factor (HSA130894), mRNA
2187	14763	27332	4.36	1.5E-02	N39521.1	EST_HUMAN	yv27b07.s1 Soares fetal liver spleen 1NfLS Homo sapiens cDNA clone IMAGE:243925 3'
2219	14784	27387	1.78	1.5E-02	AL161594.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 90
3097	15712	28183	0.99	1.5E-02	AJ006216.1	NT	Homo sapiens CACNA1F gene, exons 1 to 48
3097	15712	28184	0.99	1.5E-02	AJ006216.1	NT	Homo sapiens CACNA1F gene, exons 1 to 48
3787	16387	28853	0.96	1.5E-02	BF092942.1	EST_HUMAN	MR4-TN0115-080900-201-b12 TN0115 Homo sapiens cDNA
4222	16810	28257	0.86	1.5E-02	AA160967.1	EST_HUMAN	zq40g10.r1 Stralagene hNT neuron (#837233) Homo sapiens cDNA clone IMAGE:632226 5'
5160	17728		0.78	1.5E-02	M13879.1	NT	Human interleukin 2 gene, exons 1 and 2
5405	17963	30374	1.14	1.5E-02	AW770341.1	EST_HUMAN	nt176h11.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3007173 3'

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6436	19039	31826	1.31	1.5E-02	Q09711	SWISSPROT	HYPOTHETICAL CALCIUM-BINDING PROTEIN C18B11.04 IN CHROMOSOME 1
7360	19886		1.62	1.5E-02	11467282	NT	Cyanophora paradoxa cyanelle, complete genome
7432	19956	32821	1.36	1.5E-02	11418713	NT	Homo sapiens KIAA1009 protein (KIAA1009), mRNA
7815	20358	33265	1.44	1.5E-02	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
7822	20384	33273	4.16	1.5E-02	11417739	NT	Homo sapiens vally-RNA synthetase 2 (VARS2), mRNA
8784	21303	34224	1.62	1.5E-02	BF345554.1	EST_HUMAN	602019135F1 NCI_CGAP_Brm67 Homo sapiens cDNA clone IMAGE:4154504 5'
9389	21812		0.51	1.5E-02	AF068774.1	NT	Homo sapiens kinase-related protein isoform 1 mRNA, complete cds
9490	21948	34895	1.64	1.5E-02	D44606.1	NT	Saccharomyces cerevisiae chromosome VI plasmid GapC
9725	22223	35199	1.08	1.5E-02	R32667.1	EST_HUMAN	Yh54b10.r1 Soares placenta Nb2+P Homo sapiens cDNA clone IMAGE:133531 5'
9725	22223	35200	1.08	1.5E-02	R32667.1	EST_HUMAN	Yh54b10.r1 Soares placenta Nb2+P Homo sapiens cDNA clone IMAGE:133531 5'
10697	23227		1.71	1.5E-02	D26547.1	NT	Rice gene for thioedoxin h, complete cds
11047	23560	36597	2.32	1.5E-02	L40609.1	NT	Plasmodium falciparum (strain FCR3) variant-specific surface protein (var-2, var-3) genes, complete cds's
12076	24892		2.25	1.5E-02	AW750834.1	EST_HUMAN	RC4-CN0049-140100-011-c11 CN0049 Homo sapiens cDNA
12636	24712		1.55	1.5E-02	A1763127.1	EST_HUMAN	wf06r03.x1 NCI_CGAP_CLL1 Homo sapiens cDNA clone IMAGE:2389493 3' similar to contains Alu repetitive element; contains element MER28 MSR1 repetitive element
442	13075		1.41	1.4E-02	AE002230.2	NT	Chlamydia pneumoniae AR39, section 58 of 84 of the complete genome
1157	13760	26270	4.22	1.4E-02	7705980	NT	Homo sapiens NESH protein (LOC51225), mRNA
1299	13893		1.29	1.4E-02	U32800.1	NT	Haemophilus influenzae Rd section 115 of 163 of the complete genome
1341	13936		3.36	1.4E-02	U67779.1	NT	Xenopus laevis neurogenin related 1b (X-NGNR-1b) mRNA, complete cds
1564	14156		1.09	1.4E-02	AV723785.1	EST_HUMAN	AV723785 HTB Homo sapiens cDNA clone HTBA1H11 5'
3249	15861	28342	1.91	1.4E-02	AF160969.2	NT	Bifidobacterium longum Na+/H+ antiporter (nhaB), cytosine deaminase, and alpha-galactosidase (eglL) genes, complete cds, and N-acetylglucosaminylxylose repressor protein (nagC/xyIR) gene, partial cds
3445	16053	28530	0.96	1.4E-02	AW074212.1	EST_HUMAN	xb09d09.x1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2575783 3'
3531	16136	28616	5.67	1.4E-02	AL161586.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 82
3531	16136	28617	5.67	1.4E-02	AL161586.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 82
3571	16175	28657	0.68	1.4E-02	4503628	NT	Homo sapiens coagulation factor XII (Hageman factor) (F12), mRNA
3717	16318	28786	6.27	1.4E-02	6996918	NT	Mus musculus histocompatibility 2, complement component factor B (H2-B), mRNA
4587	17170	29614	8.86	1.4E-02	AW962688.1	EST_HUMAN	EST374761 MAGG Homo sapiens cDNA
4587	17170	29615	8.86	1.4E-02	AW962688.1	EST_HUMAN	EST374761 MAGG Homo sapiens cDNA
4767	17348	29787	1.2	1.4E-02	8922391	NT	Homo sapiens hypothetical protein FLJ10379 (FLJ10379), mRNA
4767	17348	29798	1.2	1.4E-02	8922391	NT	Homo sapiens hypothetical protein FLJ10379 (FLJ10379), mRNA
5003	17576	30020	6.64	1.4E-02	BE733142.1	EST_HUMAN	601567403F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3842280 5'



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5003	17578	30021	6.64	1.4E-02	BE733142.1	EST_HUMAN	601567403F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3842280 5'
6547	19145	31941	4.61	1.4E-02	AA559030.1	EST_HUMAN	nl11c04.s1 NCL_CGAP_Br2 Homo sapiens cDNA clone IMAGE:1029890 3' similar to contains Alu repetitive element;
6547	19145	31942	4.61	1.4E-02	AA559030.1	EST_HUMAN	nl11c04.s1 NCL_CGAP_Br2 Homo sapiens cDNA clone IMAGE:1029890 3' similar to contains Alu repetitive element;
8081	20823		1.97	1.4E-02	AL022073.1	NT	Mycobacterium tuberculosis H37Rv complete genome; segment 88/162
8829	21368	34292	1.24	1.4E-02	M81702.1	NT	Candida bodinii methanol oxidase (AOD1) gene, complete cds
8082	21818	34553	0.89	1.4E-02	AJ272265.1	NT	Homo sapiens SPP2 gene for secreted phosphoprotein 24 precursor, exons 1-8
9321	21835	34786	2.48	1.4E-02	BE544581.1	EST_HUMAN	601078239F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3484241 5'
10451	22945		0.81	1.4E-02	AL163218.2	NT	Homo sapiens chromosome 21 segment HS21C018
11765	24156	36772	12.79	1.4E-02	X60459.1	NT	Human IFNAR gene for Interferon alpha/beta receptor
12134	24387		3.62	1.4E-02	AF324985.1	NT	Arabidopsis thaliana F21J9.2 mRNA, complete cds
12433	24574		2.32	1.4E-02	11426998	NT	Homo sapiens sperm associated antigen 7 (SPAG7), mRNA
1805	14490		1.18	1.3E-02	BE739263.1	EST_HUMAN	601556462F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:3826335 5'
1898	14580	27138	2.55	1.3E-02	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
3250	15862	28343	1.91	1.3E-02	BF697081.1	EST_HUMAN	602128475F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4286203 5'
3250	15862	28344	1.91	1.3E-02	BF697081.1	EST_HUMAN	602128475F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4286203 5'
4041	16639		1.66	1.3E-02	AF169288.1	NT	Mus musculus beta-sarcoglycan gene, complete cds
5455	18090	30447	1.46	1.3E-02	AL049866.2	NT	Mus musculus chromosome X contigB; X-linked lymphocyte regulated 5 gene, Zinc finger protein 275, Zinc finger protein 92, mmxq28orf
5455	18090	30448	1.46	1.3E-02	AL049866.2	NT	Mus musculus chromosome X contigB; X-linked lymphocyte regulated 5 gene, Zinc finger protein 275, Zinc finger protein 92, mmxq28orf
6312	18919	31694	1.4	1.3E-02	U80017.1	NT	Homo sapiens basic transcription factor 2 p44 (btf2p44) gene, partial cds, neuronal apoptosis inhibitory protein (nrip) and survival motor neuron protein (smn) genes, complete cds
6345	18951	31728	0.86	1.3E-02	M62862.1	NT	C.reinhardtii ribulose 1,5-bisphosphate carboxylase/oxygenase activase mRNA, complete cds
7041	18061	30449	1.25	1.3E-02	AL161548.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 46
7041	18061	30450	1.25	1.3E-02	AL161548.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 46
7578	20084	32971	4.79	1.3E-02	A031593.1	EST_HUMAN	ow06g05.x1 Soares_parathyroid_tumor_Nb1HPA Homo sapiens cDNA clone IMAGE:1646072 3' similar to contains Alu repetitive element;
8418	20958	33876	1.63	1.3E-02	AF156961.1	NT	Homo sapiens human endogenous retrovirus W gagC3.37 G gag (gag) gene, complete cds
10108	22603	35593	1.71	1.3E-02	M63707.1	NT	Mouse kidney androgen-regulated protein (KAP) gene, complete cds
10178	22873	35695	0.77	1.3E-02	AE001304.1	NT	Chlamydia trachomatis section 31 of 87 of the complete genome
10871	23392	36406	4.07	1.3E-02	AW268563.1	EST_HUMAN	xx344603.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2815038 3'
10871	23392	36407	4.07	1.3E-02	AW268563.1	EST_HUMAN	xx344603.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2815038 3'

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11742	25051		2.12	1.3E-02	X51780.1	NT	Yeast ABP1 gene for actin binding protein
12139	25039		2	1.3E-02	Z99117.1	NT	Bacillus subtilis complete genome (section 14 of 21): from 2599451 to 2812870
12246	24457		2.77	1.3E-02	8633069	NT	Human herpesvirus 6B, complete genome
12438	24813		47.13	1.3E-02	AF152238.1	NT	Homo sapiens V1b vasopressin receptor (VPR3) gene, complete cds
228	12888		20.25	1.2E-02	X87344.1	NT	H. sapiens DMA, DMB, HLA-Z1, PP2, LMP2, TAP1, LMP7, TAP2, DOB, DOB2 and RING8, 9, 13 and 14 genes
377	13025	25511	3.79	1.2E-02	AA059299.1	EST_HUMAN	z65g01.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:381840 5' similar to contains element L1 repetitive element ;
478	13111	25601	1.71	1.2E-02	P38898	SWISSPROT	HYPOTHETICAL 17.1 KD PROTEIN IN PUR5 3 REGION
768	13387	25886	8.37	1.2E-02	A183522.1	EST_HUMAN	qd88e12.x1 Soares testis, NHT Homo sapiens cDNA clone IMAGE:1734670 3' similar to contains L1.1 L1 repetitive element ;
2221	14796	27369	1.85	1.2E-02	AL163213.2	NT	Homo sapiens chromosome 21 segment HS21C013
2223	14798	27371	1.15	1.2E-02	AV731704.1	EST_HUMAN	AV731704 HTF Homo sapiens cDNA clone HTFBHG11 5'
2487	15062	27624	1	1.2E-02	AW172350.1	EST_HUMAN	x37e09.x1 Soares NFL T_GBC_S1 Homo sapiens cDNA clone IMAGE:2659432 3'
2542	15106	27678	1.05	1.2E-02	BE538310.1	EST_HUMAN	601068406F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3454608 5'
2542	15106	27679	1.05	1.2E-02	BE538310.1	EST_HUMAN	601068406F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3454608 5'
3135	15749		7.56	1.2E-02	AA075418.1	EST_HUMAN	zm88e03.r1 Stratagene ovarian cancer (#837219) Homo sapiens cDNA clone IMAGE:545020 5'
3327	15937	28413	2.02	1.2E-02	R82805.1	EST_HUMAN	y11b08.s1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:138903 3'
4838	17513	28959	0.61	1.2E-02	AL161593.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 89
5040	17613	30057	2.65	1.2E-02	U91328.1	NT	Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (HLA-H) gene, RoRet gene, and sodium phosphate transporter (NPT3) gene, complete cds
5194	17759		1.61	1.2E-02	AB019786.1	NT	Cynops pyrrhogaster CpUbiqT mRNA, partial cds
5244	17808	30230	2.01	1.2E-02	AV731704.1	EST_HUMAN	AV731704 HTF Homo sapiens cDNA clone HTFBHG11 5'
5927	18549	31275	1.76	1.2E-02	D78589.1	NT	Rana rugosa mRNA for calreticulin, complete cds
7078	18650	32489	5.21	1.2E-02	AF175412.1	NT	Mus musculus DNA methyltransferase (Dnmt1) gene, exons 2, 3, 4, and 5
7334	18661	32725	1.06	1.2E-02	H02197.1	EST_HUMAN	y34h12.s1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:150696 3'
7353	18879	32744	19.46	1.2E-02	AV732093.1	EST_HUMAN	AV732093 HTF Homo sapiens cDNA clone HTFBIC09 5'
7939	20481	33392	2.3	1.2E-02	Q11205	SWISSPROT	CMP-N-ACE TYLNEURAMINATE-BETA-GALACTOSAMIDE-ALPHA-2,3-SIALYLTRANSFERASE (BETA-GALACTOSIDE ALPHA-2,3-SIALYLTRANSFERASE) (ALPHA 2,3-ST) (GAL-NA6S) (GAL-BETA-1,3-GALNAc-ALPHA-2,3-SIALYLTRANSFERASE) (ST3GALA.2) (SIAT4-B)
8133	20674	33585	1.2	1.2E-02	AF193612.1	NT	Homo sapiens fringe protein mRNA, partial cds
8133	20674	33586	1.2	1.2E-02	AF193612.1	NT	Homo sapiens fringe protein mRNA, partial cds
8822	21361		1.06	1.2E-02	T76987.1	EST_HUMAN	y172c08.s1 Soares fetal liver spleen INFLS Homo sapiens cDNA clone IMAGE:113774 3'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9557	22057	35018	2.7	1.2E-02	AB031013.1	NT	Norwalk-like virus genogroup 2 gene for capsid protein, complete cds
9589	22089	35053	1.74	1.2E-02	AJ246003.1	NT	Homo sapiens Spast gene for spastin protein
12448	24582		4.73	1.2E-02	C18119.1	EST_HUMAN	C18119 Human placenta cDNA (TFujiwara) Homo sapiens cDNA clone GEN-557G06 5'
1312	13906	26426	1.49	1.1E-02	AA070384.1	EST_HUMAN	zmf9e11.s1 Striatogene neuroepithelium (#837231) Homo sapiens cDNA clone IMAGE:530924 3'
1744	14334	26880	1.91	1.1E-02	X75491.1	NT	H. sapiens LIPA gene, exon 4
1744	14334	26881	1.91	1.1E-02	X75491.1	NT	H. sapiens LIPA gene, exon 4
2082	14683	27233	5.42	1.1E-02	BF345263.1	EST_HUMAN	602018037F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4153808 5'
2902	15519		4.2	1.1E-02	N96523.1	EST_HUMAN	za40605.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:285040 5'
3575	16179	28662	2.88	1.1E-02	A1853508.1	EST_HUMAN	lq95b10.x1 NCI_CGAP_OV23 Homo sapiens cDNA clone IMAGE:2216539 3' similar to SW:XPX_HUMAN
4094	16889		2.1	1.1E-02	BE144637.1	EST_HUMAN	Q92889 DNA-REPAIR PROTEIN COMPLEMENTING XP-F CELL;
4183	16773		0.61	1.1E-02	AW813786.1	EST_HUMAN	RC3-ST0197-120200-015-g11 ST0197 Homo sapiens cDNA
4956	17531	28673	2.09	1.1E-02	AL048383.2	EST_HUMAN	DKFZp586E0924_s1 586 (synonym: hufe1) Homo sapiens cDNA clone DKFZp586E0924
							Bacillus subtilis SpoVK (spoVK), YnaB (ybaA), YnaB (ybaB), GlnR (glnR), glutamine synthetase (glnA), YnaH (yhaA), YnaB (ybaB), YnaC (ybaC), YnaD (ybaD), YnaE (ybaE), YnaF (ybaF), YnaG (ybaG), YnaH (yhaH), YnaI (ybaI), YnaJ (ybaJ), xylan beta-1,4-xylosyl
6288	18906	31677	1.03	1.1E-02	U68480.1	NT	RC1-HT0256-100300-016-h07 HT0256 Homo sapiens cDNA
7594	20108	32983	2.55	1.1E-02	BE149611.1	EST_HUMAN	RC1-HT0256-100300-016-h07 HT0256 Homo sapiens cDNA
8189	20740	33652	0.49	1.1E-02	P80394	SWISSPROT	METALLOTHIONEIN (MT-1/MT-2)
8189	20740	33653	0.49	1.1E-02	P80394	SWISSPROT	METALLOTHIONEIN (MT-1/MT-2)
8574	21113	34032	0.64	1.1E-02	AW996160.1	EST_HUMAN	QV3-BN0045-220300-128-h02 BN0045 Homo sapiens cDNA
8756	21285	34215	0.69	1.1E-02	CO4803.1	EST_HUMAN	CO4803 Human heart cDNA (YNakamura) Homo sapiens cDNA clone 3NHC4040
8833	21372	34297	7.39	1.1E-02	Q61982	SWISSPROT	NEUROGENIC LOCUS NOTCH 3 PROTEIN
8942	22340	35322	2.07	1.1E-02	AA082578.1	EST_HUMAN	zn24401.r1 Striatogene neuroepithelium NT2RAMI 937234 Homo sapiens cDNA clone IMAGE:548328 5'
10006	22501	35492	3.79	1.1E-02	AA314665.1	EST_HUMAN	EST186494 Colon carcinoma (HCC) cell line II Homo sapiens cDNA 5' end
10858	23379	36398	3.88	1.1E-02	11435505	NT	Homo sapiens T-box 5 (TBX5), mRNA
11702	24115		2.57	1.1E-02	AA668238.1	EST_HUMAN	ab77111.s1 Striatogene fetal retina 937202 Homo sapiens cDNA clone IMAGE:853005 3' similar to contains
12512	16773		1.87	1.1E-02	AW813786.1	EST_HUMAN	Alu repetitive element
7	12886	25144	6.97	1.0E-02	AW846120.1	EST_HUMAN	RC3-ST0197-120200-015-g11 ST0197 Homo sapiens cDNA
1570	14163	26694	2.33	1.0E-02	AW368128.1	EST_HUMAN	MR3-CT0176-111098-003-e10 CT0176 Homo sapiens cDNA
2608	15168		1.9	1.0E-02	AA800388.1	EST_HUMAN	CM2-HT0177-041098-017-h12 HT0177 Homo sapiens cDNA
3126	15740	28209	3.7	1.0E-02	BE835556.1	EST_HUMAN	cc22h08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1350495 3'
3302	15913	28391	1.41	1.0E-02	BE868998.1	EST_HUMAN	RC0-FN0025-250500-021-402 FN0025 Homo sapiens cDNA
							601649967R1 NIH_MGC_74 Homo sapiens cDNA clone IMAGE:3933689 3'

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3558	16162		0.83	1.0E-02	AW845621.1	EST_HUMAN	MRO-CT0060-081099-003-h10 CT0060 Homo sapiens cDNA
3950	16548	29016	0.68	1.0E-02	AI065086.1	EST_HUMAN	HA0921 Human fetal liver cDNA library Homo sapiens cDNA
4891	17466	29921	5.12	1.0E-02	6753521	NT	Mus musculus corticotropin releasing hormone receptor 2 (Chr2), mRNA
4970	17544	29986	5.03	1.0E-02	R06587.1	EST_HUMAN	Y054h01.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:196633 5'
5221	17786	30204	1.01	1.0E-02	AF218910.1	NT	Homo sapiens attractin precursor (ATRIN) gene, exon 25 and complete cds, alternatively spliced
5317	17879	30298	0.98	1.0E-02	P06589	SWISSPROT	EXTENSIN PRECURSOR
5394	17952		16.85	1.0E-02	AV723678.1	EST_HUMAN	AV723678 HTB Homo sapiens cDNA clone HTBAPF08 5'
5445	18000		3.87	1.0E-02	D34632.1	NT	Arabidopsis thaliana acc2 gene for acetyl-CoA carboxylase, partial cds
5610	18239	30688	0.8	1.0E-02	H52881.1	EST_HUMAN	Y036h11.r1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:235941 5'
5921	18543	31269	0.7	1.0E-02	AF309388.1	NT	Mus musculus transcription complex subunit NF-A Tc4 (Nfatc4) gene, exons 1 and 2
6264	18872	31642	0.99	1.0E-02	AF257303.1	NT	Mus musculus synaptotagmin II (SY2) gene, complete cds
6328	18934	31709	2.67	1.0E-02	AW577113.1	EST_HUMAN	MR4-BT0356-070100-201-h01 BT0356 Homo sapiens cDNA
6328	18934	31710	2.67	1.0E-02	AW577113.1	EST_HUMAN	MR4-BT0356-070100-201-h01 BT0356 Homo sapiens cDNA
6859	19593	32425	2.22	1.0E-02	Z29842.1	NT	Z.mays U3snRNA pseudogene
8240	20781		0.46	1.0E-02	Z28107.1	NT	S.cerevisiae chromosome XI reading frame ORF YKL107w
9314	21828	34778	4.28	1.0E-02	BF036331.1	EST_HUMAN	601459570F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3863177 5'
9314	21828	34779	4.29	1.0E-02	BF036331.1	EST_HUMAN	601459570F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3863177 5'
11143	23651		2.17	1.0E-02	AF157559.1	NT	Citridia fasciculata 27 kDa guide RNA-binding protein mRNA, complete cds; mitochondrial gene for mitochondrial product
11246	23776	36833	2.02	1.0E-02	AV760016.1	EST_HUMAN	AV760016 MDS Homo sapiens cDNA clone MDSBDC10 5'
11785	25110		2.16	1.0E-02	Q62203	SWISSPROT	SPLICEOSOME ASSOCIATED PROTEIN 62 (SAP 62) (SPLICING FACTOR 3A SUBUNIT 2) (SF3A66)
11847	24862	30705	4.64	1.0E-02	AW935521.1	EST_HUMAN	RC2-DT0007-120200-016-h02 DT0007 Homo sapiens cDNA
11861	24922		6.07	1.0E-02	S70330.1	NT	Homo sapiens renal dipeptidase (RDP) gene, complete cds
12254	24898		1.53	1.0E-02	AJ276505.1	NT	Mus musculus genomic fragment, 279 Kb, chromosome 7
12422	24982		4.42	1.0E-02	X62654.1	NT	H.sapiens gene for Me491/CD83 antigen
926	13539	26057	3.16	9.0E-03	A1796126.1	EST_HUMAN	wh4209.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2383433 3' similar to contains element
1307	13901		1.26	9.0E-03	BE781889.1	EST_HUMAN	MER22 MER22 repetitive element
2439	15006	27578	3.82	9.0E-03	AL161559.2	NT	601470242F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3873346 5'
2449	15016	27598	0.87	9.0E-03	AF099934.1	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 59
2631	15547	28022	0.61	9.0E-03	A1251744.1	EST_HUMAN	Mus musculus MHC class III protein RPI1 (Rpi1) mRNA, partial cds
2931	15547	28023	0.61	9.0E-03	A1251744.1	EST_HUMAN	qh90f09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1854281 3'
3731	16332	28798	0.8	9.0E-03	J05184.1	NT	qh90f09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1854281 3'
5978	18598		1.17	9.0E-03	A1809792.1	EST_HUMAN	S.acidocalcarius thermopsis gene, complete cds
							wf77f04.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2361631 3'

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6741	19335		4.24	9.0E-03	BE745988.1	EST_HUMAN	601573438F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3834762 5'
7487	20010	32876	0.73	9.0E-03	8922570	NT	Homo sapiens hypothetical protein FLJ10650 (FLJ10650), mRNA
7818	20359		0.83	9.0E-03	AL039891.1	EST_HUMAN	DKFZp434L0412_r1 434 (synonym: hles3) Homo sapiens cDNA clone DKFZp434L0412 5'
8191	20732		0.56	9.0E-03	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
9759	22257	35240	0.5	9.0E-03	P26011	SWISSPROT	INTEGRIN BETA-7 PRECURSOR (INTEGRIN BETA-P) (M280 IEL ANTIGEN)
9776	22274	35259	1.26	9.0E-03	P20908	SWISSPROT	COLLAGEN ALPHA 1(V) CHAIN PRECURSOR
10865	23386		1.8	9.0E-03	Y18000.1	NT	Homo sapiens NF2 gene
10891	23412	36431	1.71	9.0E-03	BE395380.1	EST_HUMAN	601310881F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3632181 5'
11505	23954	37022	1.58	9.0E-03	L11144.1	NT	Homo sapiens preprogalanin (GAL1) gene, exons 1, 2, and 3
11505	23954	37023	1.58	9.0E-03	L11144.1	NT	Homo sapiens preprogalanin (GAL1) gene, exons 1, 2, and 3
12001	25111		1.79	9.0E-03	BF351141.1	EST_HUMAN	PM1-HT0452-291299-001-e09 HT0452 Homo sapiens cDNA
12221	25105		36.8	9.0E-03	BE348365.1	EST_HUMAN	hw17909.x1 NCJ CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3183161 3'
12319	24509	30943	1.38	9.0E-03	AL163267.2	NT	Homo sapiens chromosome 21 segment HS21C087
12539	24649		31.67	9.0E-03	BF351141.1	EST_HUMAN	PM1-HT0452-291299-001-e09 HT0452 Homo sapiens cDNA
527	13159		2.87	8.0E-03	AA723007.1	EST_HUMAN	zh30e03.s1 Soares_pituitary_gland_N3:HPG Homo sapiens cDNA clone IMAGE:413596 3' similar to contains Alu repetitive element;
1026	13637	26152	35.57	8.0E-03	AF106656.1	NT	Homo sapiens adenylosuccinate lyase gene, complete cds
2203	14779	27351	1.28	8.0E-03	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
3351	15959	28436	0.99	8.0E-03	BE171225.1	EST_HUMAN	RC1-HT0545-120200-011-b09 HT0545 Homo sapiens cDNA
3404	16013	28492	0.89	8.0E-03	AJ131016.1	NT	Homo sapiens SCL gene locus
3736	16339	28805	1.77	8.0E-03	P32644	SWISSPROT	HYPOTHETICAL 127.0 KD PROTEIN IN RAD24-BMH1 INTERGENIC REGION
3738	16339	28806	1.77	8.0E-03	P32644	SWISSPROT	HYPOTHETICAL 127.0 KD PROTEIN IN RAD24-BMH1 INTERGENIC REGION
4343	16930	29371	1.19	8.0E-03	BE840049.1	EST_HUMAN	QV0-FN0181-140700-304-g10 FN0181 Homo sapiens cDNA
4472	17058	29505	6.36	8.0E-03	BF363327.1	EST_HUMAN	GM4-NN0119-300600-223-b05 NN0119 Homo sapiens cDNA
5378	17937	30350	1.02	8.0E-03	U02970.1	NT	Protheca wickhamii 283-11 complete mitochondrial DNA
5410	17967	30376	0.88	8.0E-03	P01871	SWISSPROT	IG MJ CHAIN C REGION
5714	18340	30846	2.89	8.0E-03	AF110520.1	NT	Mus musculus major histocompatibility complex region NG27, NG28, RPS28, NADH oxidoreductase, NG28, KIFC1, Fas-binding protein, BING1, tapasin, RalGDS-like, KE2, BING4, beta 1,3-galactosyl transferase, and RPS18 genes, complete cds; Sacm21 gene, partial>
6346	24762	31730	1.34	8.0E-03	AP000002.1	NT	Pyrococcus horikoshii OT3 genomic DNA, 287001-544000 nt. position (27)
8848	19436	32251	4.45	8.0E-03	P55577	SWISSPROT	PROBABLE PEPTIDASE Y4NA
6999	19487		1.72	8.0E-03	V01109.1	NT	Human BK virus (strain MM) genome. (Closely related to SV40.)
7259	19787	32843	1.8	8.0E-03	M17197.1	NT	A. californica (marine gastropod mollusc) neuropeptide gene (bag cell), exon 1, 5' end

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7547	20067		1.84	8.0E-03	AB038287.1	NT	Tursiops truncatus mRNA for p40-phox, complete cds
8818	21355	34279	0.62	8.0E-03	P98160	SWISSPROT	BASEMENT MEMBRANE-SPECIFIC HEPARAN SULFATE PROTEOGLYCAN CORE PROTEIN
8841	21380	34304	3.73	8.0E-03	AW908692.1	EST_HUMAN	PRECURSOR (HSPG) (PERLECAN) (PLC)
8910	21448	34370	0.68	8.0E-03	9789956	NT	MRI-ST0111-111199-011-P06 ST0111 Homo sapiens cDNA
9859	22356		4.76	8.0E-03	BE096509.1	EST_HUMAN	Mus musculus fusion 2 (human) (Fus2), mRNA
10864	23385		3.01	8.0E-03	Z49852.1	NT	QV1-BT0677-040400-131-g03 BT0677 Homo sapiens cDNA
11259	23789	36845	1.97	8.0E-03	AA828817.1	EST_HUMAN	S. cerevisiae chromosome X reading frame ORF YJR152w
11259	23789	36846	1.97	8.0E-03	AA828817.1	EST_HUMAN	cd80a09.s1 NCL_CGAP_Ov2 Homo sapiens cDNA clone IMAGE:1374232
11362	24009	37079	4.96	8.0E-03	AF084589.1	NT	cd80a09.s1 NCL_CGAP_Ov2 Homo sapiens cDNA clone IMAGE:1374232
11713	24123		2.81	8.0E-03	M69035.1	NT	Homo sapiens melanoma-associated antigen (MAGE-C1) gene, complete cds
11761	24154		5.99	8.0E-03	AB038161.1	NT	Oryctolagus cuniculus eIF-2a kinase mRNA, complete cds
723	13343	25833	14.03	7.0E-03	AF097183.1	NT	Homo sapiens ABCG1 gene for ABC transporter (ATP-binding cassette, sub-family G (WHITE), member 1), complete cds
723	13343	25834	14.03	7.0E-03	AF097183.1	NT	Cryptosporidium parvum HC-10 gene, complete cds
1012	13622	26137	5.78	7.0E-03	AF243376.1	NT	Cryptosporidium parvum HC-10 gene, complete cds
1155	13758	26268	3.21	7.0E-03	AV731712.1	EST_HUMAN	Glycine max glutathione S-transferase GST 21 mRNA, partial cds
1408	14001		1.26	7.0E-03	Q81060	SWISSPROT	AV731712 HTF Homo sapiens cDNA clone HTFAZF10 5'
1439	14032	26560	4.09	7.0E-03	AA66298.1	EST_HUMAN	FORKHEAD BOX PROTEIN D3 (HNF3/FH TRANSCRIPTION FACTOR GENESIS) (HEPATOCYTE
1550	14142	26675	3.14	7.0E-03	AW303599.1	EST_HUMAN	NUCLEAR FACTOR 3 FORKHEAD HOMOLOG 2 (HFH-2)
2287	15462	27447	2.12	7.0E-03	P04929	SWISSPROT	ab79b09.s1 Strabagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:853145 3'
3614	16217	28696	0.58	7.0E-03	AI150273.1	EST_HUMAN	xx21b02.x1 Soares NFL T_GBC S1 Homo sapiens cDNA clone IMAGE:2813739 3'
3830	16430	28892	0.91	7.0E-03	AW444463.1	EST_HUMAN	HISTIDINE-RICH GLYCOPROTEIN PRECURSOR
3885	16483	28945	1.01	7.0E-03	AF196344.1	NT	qf34h02.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1751955 3'
4091	16430	28892	0.63	7.0E-03	AW444463.1	EST_HUMAN	UI-H-BI3-akb-c-10-Q-UI.s1 NCL_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:2733691 3'
4704	17286		1.1	7.0E-03	AA60888.1	EST_HUMAN	Rattus norvegicus neuronal nicotinic acetylcholine receptor subunit (Alpha10) mRNA, complete cds
5125	17697		2.08	7.0E-03	AL163278.2	NT	UI-H-BI3-akb-c-10-Q-UI.s1 NCL_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:2733691 3'
5985	18605		0.79	7.0E-03	H71106.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C078
6280	24760		5.32	7.0E-03	AW661059.1	EST_HUMAN	yf82g01.f1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:211824 5' similar to gb:X14723 CLUSTERIN PRECURSOR (HUMAN);
6456	19057	31842	1.45	7.0E-03	W68251.1	EST_HUMAN	RC1-CT0286-050400-018-c08 CT0286 Homo sapiens cDNA
6658	19254	32056	2.98	7.0E-03	AA327129.1	EST_HUMAN	z433f10.f1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:342475 5'
							EST30874 Colon 1 Homo sapiens cDNA 5' end

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Table 4  
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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6681	19277	32080	0.92	7.0E-03	BE857385.1	EST_HUMAN	7g34b10.x1 NCL CGAP_Bm23 Homo sapiens cDNA clone IMAGE:3308347 3' similar to TR:Q13387
7139	19519	32341	2.12	7.0E-03	BE928133.1	EST_HUMAN	Q13387 HYPOTHETICAL PROTEIN 384D8_2, contains TAR1.12 TAR1 repetitive element ;
7529	20049	32921	5.78	7.0E-03	Z35838.1	NT	CM2-CT0478-230800-347-b11 CT0478 Homo sapiens cDNA
7529	20049	32922	5.78	7.0E-03	Z35838.1	NT	S.cerevisiae chromosome II reading frame ORF YBL077w
7789	20332	33238	0.54	7.0E-03	AJ229043.1	NT	S.cerevisiae chromosome II reading frame ORF YBL077w
7789	20332	33239	0.54	7.0E-03	AJ229043.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 3/3
8055	20597	33504	2.36	7.0E-03	BE175667.1	EST_HUMAN	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 3/3
9318	21832		0.6	7.0E-03	AF111168.2	NT	RC5-HT0582-160300-011-D02 HT0582 Homo sapiens cDNA
9513	22013	34972	0.87	7.0E-03	N52378.1	EST_HUMAN	Homo sapiens serine palmitoyl transferase, subunit II gene, complete cds; and unknown genes
9636	22136	35101	2.48	7.0E-03	P48982	SWISSPROT	yy49c10.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:246068 3' similar to contains
9636	22136	35102	2.48	7.0E-03	P48982	SWISSPROT	Alu repetitive element;
10207	22702		0.99	7.0E-03	AV687379.1	EST_HUMAN	BETA-GALACTOSIDASE PRECURSOR (LACTASE)
10381	22875		0.93	7.0E-03	AJ759734.1	EST_HUMAN	BETA-GALACTOSIDASE PRECURSOR (LACTASE)
10708	23235	36248	3.46	7.0E-03	AB008852.1	NT	AV687379 GKC Homo sapiens cDNA clone GKCAFC07 5'
10780	23304	36311	1.61	7.0E-03	AJ004862.1	NT	wc37e09.x1 NCL CGAP_P128 Homo sapiens cDNA clone IMAGE:2320840 3'
10780	23304	36312	1.61	7.0E-03	AJ004862.1	NT	Bos taurus mRNA for NDP52, complete cds
10930	23448		1.66	7.0E-03	AJ242804.1	NT	Homo sapiens partial MUC5B gene, exon 1-29
12273	25095		1.83	7.0E-03	H94065.1	EST_HUMAN	Homo sapiens partial MUC5B gene, exon 1-29
12281	24484		1.58	7.0E-03	BE263253.1	EST_HUMAN	Sporobolus stapfianus mRNA for putative glycine and proline-rich protein
12382	24549		1.86	7.0E-03	Y17455.1	NT	yy15h01.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:242833 3' similar to contains
12527	25092		1.38	7.0E-03	AL163300.2	NT	Alu repetitive element;
12664	24734		3.16	7.0E-03	AW868110.1	EST_HUMAN	601145154F2 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3160476 5'
1283	13879	26400	10.8	6.0E-03	AW511148.1	EST_HUMAN	Homo sapiens LSPR2 gene, penultimate exon
1283	13879	26401	10.8	6.0E-03	AW511148.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C100
2800	15352	27921	1.82	6.0E-03	AF112374.1	NT	RCO-SN0052-110400-021-a04 SN0052 Homo sapiens cDNA
2916	15533	28004	3.54	6.0E-03	AA759135.1	EST_HUMAN	hd22a05.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2810224 3' similar to
2916	15533	28005	3.54	6.0E-03	AA759135.1	EST_HUMAN	SW_PXR_HUMAN 075469 ORPHAN NUCLEAR RECEPTOR PXR ;
3283	15894		2.17	6.0E-03	HT5690.1	EST_HUMAN	hd22a05.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2810224 3' similar to
							SW_PXR_HUMAN 075469 ORPHAN NUCLEAR RECEPTOR PXR ;
							Danio rerio odorant receptor gene cluster
							ah78e11.s1 Soares testis_NHT Homo sapiens cDNA clone 1321772 3'
							ah78e11.s1 Soares testis_NHT Homo sapiens cDNA clone 1321772 3'
							yy77h04.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:211351 5'

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3344	15954		0.79	6.0E-03	AF190338.1	NT	Nicotian sp. cytochrome c oxidase subunit II gene, partial cds; mitochondrial gene for mitochondrial product
3429	16037	28518	1.14	6.0E-03	U90880.1	NT	Fugu rubripes zinc finger protein, isotocin, fatty acid binding protein, sepiapterin reductase and vasotocin genes, complete cds
3428	16037	28519	1.14	6.0E-03	U90880.1	NT	Fugu rubripes zinc finger protein, isotocin, fatty acid binding protein, sepiapterin reductase and vasotocin genes, complete cds
3600	16204		1.13	6.0E-03	W37985.1	EST_HUMAN	zc13a11.1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:322172 5'
3721	16322	28789	2.6	6.0E-03	BF510986.1	EST_HUMAN	UI-H-B14-apm-c-08-Q-UI.s1 NCI_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3087754 3'
3757	16358	28828	1.53	6.0E-03	BE077356.1	EST_HUMAN	RC1-BT0606-260400-014-a07 BT0606 Homo sapiens cDNA
3845	16444	28905	1.14	6.0E-03	6754029	NT	Mus musculus glucosamine-6-phosphate deaminase (Gnpl), mRNA
3965	16593	29066	0.83	6.0E-03	AW847284.1	EST_HUMAN	RC0-CT0204-240999-021-b10 CT0204 Homo sapiens cDNA
4030	16628		0.92	6.0E-03	BE250108.1	EST_HUMAN	600942904F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2959513 5'
4418	17004		1.1	6.0E-03	N58948.1	EST_HUMAN	yy62h10.s1 Soares_multiple_sclerosis_2NBHMS Homo sapiens cDNA clone IMAGE:278179 3'
4454	17040		1.58	6.0E-03	A1016833.1	EST_HUMAN	ov23c11.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1639124 3'
4805	17383	29833	8.21	6.0E-03	AA324242.1	EST_HUMAN	EST27116 Cerebellum II Homo sapiens cDNA 5' and similar to EST containing Alu repeat
5290	17852		0.92	6.0E-03	L34170.1	NT	Human germline UBE1L gene similar to the gene for ubiquitin-activating enzyme, exons 1-22
6301	24761	31680	0.72	6.0E-03	9627521	NT	Varicella virus, complete genome
6908	19640	32476	0.73	6.0E-03	O14994	SWISSPROT	SYNAPSIN III
6939	18047	30469	0.72	6.0E-03	BE253748.1	EST_HUMAN	601112353F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3353172 5'
7642	20154	33040	0.76	6.0E-03	AF128894.1	NT	Homo sapiens telomerase reverse transcriptase (TERT) gene, exons 7-16 and complete cds
7774	20283	33180	24.22	6.0E-03	AJ243211.1	NT	Homo sapiens DMBT1 candidate tumour suppressor gene, exons 1 to 55 ow13a04.x1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1646670 3' similar to contains MER10.b1 MER10 repetitive element
7799	20342	33251	6.91	6.0E-03	A103980.1	EST_HUMAN	
7915	20457	33363	2.45	6.0E-03	AW798337.1	EST_HUMAN	RC0-UM0051-210300-032-g02 UM0051 Homo sapiens cDNA
7990	20532		1.59	6.0E-03	BF038198.1	EST_HUMAN	601454915F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3858626 5'
9473	21872	34821	8.46	6.0E-03	D10548.1	NT	Subacute sclerosing panencephalitis (SSPE) virus mRNA for fusion protein
9956	22451		2.15	6.0E-03	A1432661.1	EST_HUMAN	tt22c02.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2131202 3' similar to SW:R13A_HUMAN
10067	22562	35557	0.73	6.0E-03	AJ011849.1	NT	Bacillus subtilis fnd gene
10197	22692		0.91	6.0E-03	AF084555.1	NT	Homo sapiens okadaic acid-inducible and cAMP-regulated phosphoprotein 19 (ARPP-19) mRNA, complete cds
10303	22797	35788	0.63	6.0E-03	X68396.1	NT	M.thermoformicicum complete plasmid pFV1 DNA
10623	23155	36188	2.04	6.0E-03	AW962164.1	EST_HUMAN	EST374237 MAGE resequences, MAGG Homo sapiens cDNA
10690	23220		2.23	6.0E-03	11545814	NT	Homo sapiens hypothetical zinc finger protein FLJ14011 (FLJ14011), mRNA



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10728	23252	38269	2.16	6.0E-03	A1420786.1	EST_HUMAN	te91t12.x1 NCI CGAP_P128 Homo sapiens cDNA clone IMAGE:2094070 3' similar to TR:O00519 O00519 FATTY ACID AMIDE HYDROLASE. ;
10728	23252	38270	2.16	6.0E-03	A1420786.1	EST_HUMAN	te91t12.x1 NCI CGAP_P128 Homo sapiens cDNA clone IMAGE:2094070 3' similar to TR:O00519 O00519 FATTY ACID AMIDE HYDROLASE. ;
10861	23382		2.08	6.0E-03	U14556.1	NT	Mus musculus zinc-finger protein mRNA, complete cds
10862	23383	38401	2.4	6.0E-03	BE737895.1	EST_HUMAN	601572746F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:3839747 5'
11630	24072	37134	1.57	6.0E-03	H70296.1	EST_HUMAN	yr9501.1f Soares fetal liver spleen 1N1LS Homo sapiens cDNA clone IMAGE:213049 5' similar to SP:6FGD_PIG P14332 6-PHOSPHOGLUCONATE DEHYDROGENASE, DECARBOXYLATING ;
11829	24195		3.52	6.0E-03	AF010498.1	NT	Rhodobacter capsulatus strain SB1003, partial genome
11956	24848		5.1	6.0E-03	AE000833.1	NT	Methanobacterium thermoautotrophicum from bases 429192 to 450298 (section 39 of 148) of the complete genome
12039	24914		3.02	6.0E-03	U30790.1	NT	Pneumocystis carinii f. sp. ratii guanine nucleotide binding protein alpha subunit (pcg1) gene, complete cds
12088	24357		1.81	6.0E-03	Q62209	SWISSPROT	SYNAPTOMEMAL COMPLEX PROTEIN 1 (SCP-1 PROTEIN)
12402	24581		1.49	6.0E-03	BE798019.1	EST_HUMAN	601482621F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3865388 5'
12418	24571		1.52	6.0E-03	AJ245480.1	NT	Brassica napus sig gene for S-locus glycoprotein, cultivar T2
12556	24942		1.6	6.0E-03	X74807.1	NT	R. norvegicus VEGP2 gene
229	12889	25375	5.16	5.0E-03	X87344.1	NT	H. sapiens DMA, DMB, HLA-Z1, IPP2, LMP2, TAP1, LMP7, TAP2, DOB, DOB2 and RING8, 9, 13 and 14 genes
697	13320	25808	1.73	5.0E-03	L25105.1	NT	Chlamydia trachomatis partial ORFB, aminoacyl-tRNA synthase, complete cds; complete ORFA, and grpE- like protein, complete cds
697	13320	25807	1.73	5.0E-03	L25105.1	NT	Chlamydia trachomatis partial ORFB, aminoacyl-tRNA synthase, complete cds; complete ORFA, and grpE- like protein, complete cds
698	13320	25808	2.74	5.0E-03	L25105.1	NT	Chlamydia trachomatis partial ORFB, aminoacyl-tRNA synthase, complete cds; complete ORFA, and grpE- like protein, complete cds
698	13320	25807	2.74	5.0E-03	L25105.1	NT	Chlamydia trachomatis partial ORFB, aminoacyl-tRNA synthase, complete cds; complete ORFA, and grpE- like protein, complete cds
1151	13754	26284	0.91	5.0E-03	AJ010457.1	NT	Arabidopsis thaliana mRNA for DEAD box RNA helicase RH3
2706	15263	27830	2.77	5.0E-03	AB033006.1	NT	Homo sapiens mRNA for KIAA1180 protein, partial cds
2862	15578	28057	0.66	5.0E-03	BE286057.1	EST_HUMAN	601194789F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3538798 5'
3170	15784	28256	4.54	5.0E-03	T87623.1	EST_HUMAN	yc81f09.s1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:22395 3'
3189	15801		2.22	5.0E-03	AL161491.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 3
3202	15814	28289	1.15	5.0E-03	R71794.1	EST_HUMAN	yf88g02.s1 Soares breast 2N1bH8t Homo sapiens cDNA clone IMAGE:155668 3'
3316	15926		0.86	5.0E-03	AJ297357.1	NT	Homo sapiens partial LIMD1 gene for LIM domains containing protein 1 and KIAA0851 gene

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Table 4  
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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3728	16329	28795	5.04	5.0E-03	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
3762	16363	28831	4.88	5.0E-03	AF147449.2	NT	Pseudomonas aeruginosa strain PAO1 penicillin-binding protein 1B (penB) gene, complete cds
3822	16422	28884	0.68	5.0E-03	U38914.1	NT	Citrus sinensis seed storage protein citrin mRNA, complete cds
4043	16641		1.78	5.0E-03	AA286675.1	EST_HUMAN	EST12218 Uterus tumor 1 Homo sapiens cDNA 5' end
4204	16793	29239	0.57	5.0E-03	AJ002125.1	NT	Matrix domestica Zfx type gene
4382	16978	29425	0.88	5.0E-03	H78355.1	EST_HUMAN	yw78g10.r1 Soares fetal liver spleen 1NFSL Homo sapiens cDNA clone IMAGE:240068 5'
4394	16422	28884	0.71	5.0E-03	U38914.1	NT	Citrus sinensis seed storage protein citrin mRNA, complete cds
4670	17252	29704	0.68	5.0E-03	U46891.1	NT	Human putative chromatin structure regulator (SUPT6H) mRNA, complete cds
4714	17295	29739	0.8	5.0E-03	AJ131016.1	NT	Homo sapiens SCL gene locus
4828	17406	29860	1.72	5.0E-03	AJ752387.1	EST_HUMAN	cn15c02.x1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBC_cn15c02 random
5087	17640	30083	1.02	5.0E-03	P15265	SWISSPROT	SPERM MITOCHONDRIAL CAPSULE SELENOPROTEIN (MCS)
5391	17949	30362	0.95	5.0E-03	AF171666.1	NT	Bos taurus acidic alpha-glucosidase gene, exons 2 through 20 and complete cds
5964	18586	31320	7.68	5.0E-03	P35500	SWISSPROT	SODIUM CHANNEL PROTEIN PARA (PARALYTIC PROTEIN)
							PROBABLE UBIQUITIN CARBOXYL-TERMINAL HYDROLASE FAF-Y (UBIQUITIN THIOLESTERASE FAF-Y) (UBIQUITIN-SPECIFIC PROCESSING PROTEASE FAF-Y) (DEUBIQUITINATING ENZYME FAF-Y) (FAT FACETS PROTEIN RELATED, Y-LINKED) (UBIQUITIN-SPECIFIC PROTEASE 9, Y CHROMOSOME)
6195	18805	31574	2.33	5.0E-03	O00507	SWISSPROT	Chlamydia pneumoniae AR39, section 62 of 94 of the complete genome
6230	18839		0.91	5.0E-03	AE002234.2	NT	600944564T1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2860871 3'
6708	19302		10.88	5.0E-03	BE300091.1	EST_HUMAN	Mus musculus AMD1 gene for S-adenosylmethionine decarboxylase, complete cds
6932	18040	30483	6.39	5.0E-03	AB025024.1	NT	Tursiops truncatus mRNA for p40-phox, complete cds
7106	19446		0.85	5.0E-03	AB038267.1	NT	RC3-CT0255-03 1099-011-1-07 CT0255 Homo sapiens cDNA
7595	20109		1.16	5.0E-03	AW854327.1	EST_HUMAN	Homo sapiens MASL1 mRNA, complete cds
7744	20252	33146	7.43	5.0E-03	AB016816.1	NT	RC6-CT0281-081199-011-A05 CT0281 Homo sapiens cDNA
8162	20703	33618	1	5.0E-03	AW855907.1	EST_HUMAN	RC6-CT0281-081199-011-A05 CT0281 Homo sapiens cDNA
8162	20703	33619	1	5.0E-03	AW855907.1	EST_HUMAN	BETA-GALACTOSIDASE PRECURSOR (LACTASE)
8181	20722	33636	2.26	5.0E-03	P49892	SWISSPROT	Mouse complement receptor (CR2) mRNA, 3' end
8548	21087		6.36	5.0E-03	M61132.1	NT	Escherichia coli genomic DNA, (19.1 - 19.4 min)
8742	21281	34204	1.47	5.0E-03	D90723.1	NT	Rabbit uteroglobin (UGL) gene, exon 1
8870	21409	34333	0.69	5.0E-03	M25090.1	NT	SOF1 PROTEIN
9503	22003	34960	0.45	5.0E-03	P33750	SWISSPROT	Plasmodium berghei 58 kDa phosphoprotein mRNA, partial cds
9753	22251	35234	0.82	5.0E-03	L21710.1	NT	RC0-S10379-210100-032-c02 ST0379 Homo sapiens cDNA
9881	22378	35354	0.77	5.0E-03	AA821888.1	EST_HUMAN	RC0-S10379-210100-032-c02 ST0379 Homo sapiens cDNA
10062	22557	35552	0.49	5.0E-03	AA533143.1	EST_HUMAN	RC0-S10379-210100-032-c02 ST0379 Homo sapiens cDNA clone IMAGE:995587

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10236	22731	35722	0.92	5.0E-03	7682557	NT	Homo sapiens PRO0471 protein (PRO0471), mRNA
10598	23133		10.33	5.0E-03	T18586.1	EST_HUMAN	694F Heart Homo sapiens cDNA clone 694
10631	23163	36175	2.28	5.0E-03	D26273.1	NT	Unknown nitrogen-fixing bacteria nifD gene encoding alpha subunit of dinitrogenase (MoFe protein)
10818	23340	36354	2.94	5.0E-03	AW170334.1	EST_HUMAN	xm59g05.x1 Soares_NH/CeC_cervical_tumor Homo sapiens cDNA clone IMAGE:2698040 3' similar to contains L1 L2 L1 repetitive element ;
10819	23340	36355	2.94	5.0E-03	AW170334.1	EST_HUMAN	xm59g05.x1 Soares_NH/CeC_cervical_tumor Homo sapiens cDNA clone IMAGE:2698040 3' similar to contains L1 L2 L1 repetitive element ;
10920	23439	36480	2.02	5.0E-03	T49153.1	EST_HUMAN	y509e04.r1 Stratiogene placenta (#937225) Homo sapiens cDNA clone IMAGE:70888 5'
11212	23715		3.91	5.0E-03	BE048055.1	EST_HUMAN	tz48c04.y1 NCL_CGAP_Brn52 Homo sapiens cDNA clone IMAGE:2281622 5'
11872	25054		8.12	5.0E-03	AF047874.1	NT	Gallus gallus glyceraldehyde-3-phosphate dehydrogenase mRNA, complete cds
12111	24372		21.73	5.0E-03	AF087253.1	NT	Brugia malayi Y chromosome marker
12217	24440		1.81	5.0E-03	L10347.1	NT	Human pro-alpha1 type II collagen (COL2A1) gene exons 1-54, complete cds
12250	24481		1.78	5.0E-03	AA458597.1	EST_HUMAN	zk75a03.s1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:809548 3' similar to SW:DXA2_MOUSE P14885 PROBABLE DIPHENOL OXIDASE A2 COMPONENT ;
12283	24856		5.46	5.0E-03	BF572332.1	EST_HUMAN	602077774F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:4252002 5'
12473	24598	30883	2.21	5.0E-03	AW449109.1	EST_HUMAN	UI-H-BI3-alk-f408-0-UI.s1 NCL_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:2734215 3'
12498	24832		1.42	5.0E-03	Q02398	SWISSPROT	COLLAGEN ALPHA 1(VII) CHAIN PRECURSOR (LONG-CHAIN COLLAGEN) (LC COLLAGEN)
253	12913	25397	2.58	4.0E-03	AW500186.1	EST_HUMAN	UI-HF-BND-alk-h-04-0-UI.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078831 5'
343	12895	25480	1.77	4.0E-03	R46482.1	EST_HUMAN	y651e04.s1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:35988 3'
468	13101	25594	0.69	4.0E-03	P54675	SWISSPROT	PHOSPHATIDYLINOSITOL 3-KINASE 3 (PI3-KINASE) (PTDINS-3-KINASE) (PI3K)
628	13266	25730	3.12	4.0E-03	AA83939.1	EST_HUMAN	on75g12.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1562568 3'
910	13523	26043	1.75	4.0E-03	R46482.1	EST_HUMAN	y651e04.s1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:35988 3'
944	13557		3.19	4.0E-03	AW749101.1	EST_HUMAN	RC3-BT0333-110100-012-f01 BT0333 Homo sapiens cDNA
1190	13781	26302	25.91	4.0E-03	AA098777.1	EST_HUMAN	z81e08.r1 Stratiogene colon (#937204) Homo sapiens cDNA clone IMAGE:510998 5'
1211	13811	26325	1.71	4.0E-03	AW794740.1	EST_HUMAN	RC6-UM0014-170400-023-G01 UM0014 Homo sapiens cDNA
1348	13841	26463	1.4	4.0E-03	AA284374.1	EST_HUMAN	zs59a01.r1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:701738 5'
1630	14222		1.06	4.0E-03	AV708305.1	EST_HUMAN	AV708305 ADC Homo sapiens cDNA clone ADCAKB06 5'
1779	14388	26913	2.74	4.0E-03	U33472.1	NT	Rattus norvegicus type 1 astrocyte and olfactory-limbic associated protein AT1-48 mRNA, complete cds
2082	14642	27217	14.12	4.0E-03	AA098777.1	EST_HUMAN	z81e08.r1 Stratiogene colon (#937204) Homo sapiens cDNA clone IMAGE:510998 5'
2288	14863		1.92	4.0E-03	BE410556.1	EST_HUMAN	G01304161F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3638510 5'
2317	14888	27464	2.63	4.0E-03	AW794740.1	EST_HUMAN	RC6-UM0014-170400-023-G01 UM0014 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2608	15170	27737	1.6	4.0E-03	U52111.2	NT	Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Ca2+/Calmodulin-dependent protein kinase I (CAMKI), creatine transporter (CRTR), CDM protein (CDM), adrenergic dystrophy protein >
2608	15170	27738	1.6	4.0E-03	U52111.2	NT	Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Ca2+/Calmodulin-dependent protein kinase I (CAMKI), creatine transporter (CRTR), CDM protein (CDM), adrenergic dystrophy protein >
2715	15272	27838	3.14	4.0E-03	AJ277365.1	NT	Homo sapiens polyglutamine-containing C14ORF4 gene
2715	15272	27839	3.14	4.0E-03	AJ277365.1	NT	Homo sapiens polyglutamine-containing C14ORF4 gene
2721	15277	27842	1.25	4.0E-03	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
3262	15874	28355	1.07	4.0E-03	BE154134.1	EST_HUMAN	PM1-HT0340-151299-003-H08 HT0340 Homo sapiens cDNA
3262	15874	28356	1.07	4.0E-03	BE154134.1	EST_HUMAN	PM1-HT0340-151299-003-H08 HT0340 Homo sapiens cDNA
3583	16187	28669	0.85	4.0E-03	AW188426.1	EST_HUMAN	X98704.x1 NCI CGAP_Co18 Homo sapiens cDNA clone IMAGE:2665279 3'
3583	16187	28670	0.85	4.0E-03	AW188426.1	EST_HUMAN	X98704.x1 NCI CGAP_Co18 Homo sapiens cDNA clone IMAGE:2665279 3'
3685	16286	28755	0.63	4.0E-03	Q13608	SWISSPROT	OLFACTORY RECEPTOR 511 (OLFACTORY RECEPTOR-LIKE PROTEIN OLF1)
3696	16297	28767	0.63	4.0E-03	AV646253.1	EST_HUMAN	AV646253 GLC Homo sapiens cDNA clone GLCADO2 3'
4087	16663		1.93	4.0E-03	AJ011712.1	NT	Homo sapiens TNNT1 gene, exons 1-11 (and joined CDS)
4323	16909	29350	1.88	4.0E-03	A1766727.1	EST_HUMAN	w187a06.x1 NCI CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2400274 3'
5307	17869	30291	2.1	4.0E-03	AW103719.1	EST_HUMAN	xe83d03.x1 NCI CGAP_Brm35 Homo sapiens cDNA clone IMAGE:2614469 3' similar to contains L1.t1 L1
5354	17914	30329	1.17	4.0E-03	AA699995.1	EST_HUMAN	L1 repetitive element;
5433	17989	30395	1.19	4.0E-03	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
5480	18114	30523	1.36	4.0E-03	AF005859.1	NT	Drosophila melanogaster anon2D7 (anon2D7) mRNA, complete cds
5596	18226	30673	21.16	4.0E-03	AF169825.1	NT	Rattus norvegicus beta-catenin binding protein mRNA, complete cds
5963	18585	31319	3.31	4.0E-03	P04196	SWISSPROT	(HPRG)
5965	18587	31321	1.56	4.0E-03	P21849	SWISSPROT	MAJOR SURFACE-LABELLED TROPHOZOITE ANTIGEN PRECURSOR
6042	18661	31400	0.97	4.0E-03	AL133871.1	EST_HUMAN	DKFZp7611014_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp7611014 5'
6235	18844		3.41	4.0E-03	U22180.1	NT	Rattus norvegicus opsin gene, complete cds
6381	19895	31765	0.98	4.0E-03	AW590572.1	EST_HUMAN	hg48c07.x1 NCI CGAP_GC6 Homo sapiens cDNA clone IMAGE:2948652 3'
6451	19052	31837	1.95	4.0E-03	BE548453.1	EST_HUMAN	601076015F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3461954 5'
6775	19367	32179	1.04	4.0E-03	AA813222.1	EST_HUMAN	aj32f11.s1 Soares testis_NHT Homo sapiens cDNA clone 1392045 3'
6872	19608	32440	1.51	4.0E-03	U78408.1	NT	Lycopodium esculentum knotted 3 protein (TKn3) mRNA, complete cds
7130	19470	32288	1.13	4.0E-03	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
7130	19470	32289	1.13	4.0E-03	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
7249	19778	32633	5.45	4.0E-03	Q02817	SWISSPROT	MUCIN 2 PRECURSOR (INTESTINAL MUCIN 2)

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7459	19982	32847	1.14	4.0E-03	AI681483.1	EST_HUMAN	bc37g12.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2271814 3'
7461	19984	32849	0.95	4.0E-03	BE670170.1	EST_HUMAN	7e31b02.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3284043 3'
7883	20425	33334	0.63	4.0E-03	Q91T92	SWISSPROT	ADAM-TS 5 (A DISINTEGRIN AND METALLOPROTEINASE WITH THROMBOSPONDIN MOTIFS 5) (ADAMTS-5) (ADAM-TS5) (AGGRECANASE-2) (ADMP-2) (ADAM-TS 11)
7992	20534	33438	4.22	4.0E-03	AF111944.1	NT	Dicystostellium discoidium AX4 development protein DG1122 (DG1122) gene, partial cds
8145	20686	33598	1.94	4.0E-03	7662067	NT	Homo sapiens KIAA0345 gene product (KIAA0345), mRNA
8648	21187	34105	6.89	4.0E-03	AI553983.1	EST_HUMAN	bc49b11.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2090013 3' similar to contains Alu repetitive element
8821	21360		4.46	4.0E-03	AL163208.2	NT	Homo sapiens chromosome 21 segment HS21C009
8830	21369	34293	3.12	4.0E-03	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
8840	22338	35319	0.78	4.0E-03	H30664.1	EST_HUMAN	yp42g12.r1 Soares retina N2b5HR Homo sapiens cDNA clone IMAGE:190150 5'
10278	22773	35762	0.7	4.0E-03	AL161555.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 55
11008	23523	36557	6.08	4.0E-03	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C008
11383	23845	36909	1.69	4.0E-03	AI208703.1	EST_HUMAN	qg58c05.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1839176 3'
11393	23845	36910	1.69	4.0E-03	AI208703.1	EST_HUMAN	qg58c05.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1839176 3'
11607	24050	37116	1.82	4.0E-03	AE002102.1	NT	Ureaplasma urealyticum section 3 of 59 of the complete genome
11938	25071		10.45	4.0E-03	BE815173.1	EST_HUMAN	PM4-BN0138-180600-002-b08 BN0138 Homo sapiens cDNA
11982	24284		1.62	4.0E-03	BE268280.1	EST_HUMAN	601118164F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3028095 5'
12047	24331		2.71	4.0E-03	AW504273.1	EST_HUMAN	UI-HF-BN0-01p-g-0-0-UI.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3080622 5'
12284	24493		3.86	4.0E-03	BF224125.1	EST_HUMAN	7q74c09.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE: 3' similar to contains Alu repetitive element; contains element MER31 repetitive element
12341	24875		2.24	4.0E-03	AW614596.1	EST_HUMAN	h02c07.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2953932 3' similar to contains element LTR5 repetitive element
12352	24532		3.01	4.0E-03	AW819141.1	EST_HUMAN	RC3-ST0281-240400-015-f03 ST0281 Homo sapiens cDNA
394	13040	25531	1.73	3.0E-03	AF011920.1	NT	Homo sapiens protein kinase CK2 catalytic subunit alpha gene, exon 1
912	13525	26044	5.57	3.0E-03	AF011920.1	NT	Homo sapiens protein kinase CK2 catalytic subunit alpha gene, exon 1
1701	14294	26829	2.85	3.0E-03	AA468110.1	EST_HUMAN	nc73c05.s1 NCI_CGAP_Pr2 Homo sapiens cDNA clone IMAGE:782984 similar to contains Alu repetitive element
2268	14871		1.76	3.0E-03	AF055096.1	NT	Homo sapiens MHC class 1 region
2333	14904		4.14	3.0E-03	Z32521.1	NT	S.cereale (cv. Halo) mRNA for triosephosphate isomerase
2334	14905	27475	1.03	3.0E-03	U46858.1	NT	Mus musculus intestinal trefoil factor gene, partial cds
2334	14905	27476	1.03	3.0E-03	U46858.1	NT	Mus musculus intestinal trefoil factor gene, partial cds
2448	15015	27587	1.13	3.0E-03	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3022	15638		0.66	3.0E-03	Y08006.1	NT	Arabidopsis thaliana rpoMt gene
3119	15733	28203	3.25	3.0E-03	BE379286.1	EST_HUMAN	601237882F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3609933 5'
3186	15798	28270	3.21	3.0E-03	AW802887.1	EST_HUMAN	IL2-UM0076-240300-066-D03 UM0076 Homo sapiens cDNA
3484	16071	28544	2.13	3.0E-03	U34606.1	NT	Mus musculus alpha-1(XVII) collagen (COL18A1) gene, exon 1 and 2
3473	16079		7.31	3.0E-03	Y12500.1	NT	C.elegans samdc gene
4049	16848	29114	7.57	3.0E-03	AV762392.1	EST_HUMAN	AV762392 MDS Homo sapiens cDNA clone MDSBSG01 5'
4049	16846	29115	7.57	3.0E-03	AV762392.1	EST_HUMAN	AV762392 MDS Homo sapiens cDNA clone MDSBSG01 5'
4109	16703	29156	1.75	3.0E-03	A1792278.1	EST_HUMAN	ah0409.y5 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:1155689 5'
4485	17070	29520	6.2	3.0E-03	AJ011432.1	NT	Rattus norvegicus gdnf gene
4560	17143		0.71	3.0E-03	BE348739.1	EST_HUMAN	h168g08.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3151834 3'
4616	17199	29647	5.73	3.0E-03	A1536141.1	EST_HUMAN	xu8.P10.H3 conorm Homo sapiens cDNA clone IMAGE:3151834 3'
4960	17535	29877	2.45	3.0E-03	A1732754.1	EST_HUMAN	ab18a08.x5 Stratagene lung (#837210) Homo sapiens cDNA clone IMAGE:841142 3' similar to contains Alu repetitive element;
4979	17553	29895	6.1	3.0E-03	BE787945.1	EST_HUMAN	601482715F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3885483 5'
5069	17642	30084	1.01	3.0E-03	AJ007044.1	NT	Oryctolagus Cuniculus sod gene
5069	17642	30085	1.01	3.0E-03	AJ007044.1	NT	Oryctolagus Cuniculus sod gene
5470	18104	30423	3.56	3.0E-03	8922498	NT	Homo sapiens hypodermal protein FLJ10539 (FLJ10539), mRNA
5744	18370	31078	1.18	3.0E-03	AJ249881.1	NT	Mus musculus mRNA for hypothetical protein (ORF2 ortholog)
5809	18434	31155	13.97	3.0E-03	U35323.1	NT	Mus musculus H2-M alpha chain (H2-Ma) gene, H2-M beta 2 chain (H2-Mb2) gene, H2-M beta 1 chain (H2-Mb1) gene, low molecular weight protein 2 Lmp2 (Lmp2) gene, complete cds
6670	19266	32070	10.41	3.0E-03	AA456701.1	EST_HUMAN	aat3f10.r1 Soares_NhrMPu_S1 Homo sapiens cDNA clone IMAGE:813163 5'
7256	19784	32640	1.45	3.0E-03	AJ011419.1	NT	Kluweromyces marianus pcpl3 gene for purine-cytosine permease
7531	20051	32624	3.37	3.0E-03	AB021736.1	NT	Oryza sativa gene for bZIP protein, complete cds
7879	20421	33329	0.91	3.0E-03	BF333058.1	EST_HUMAN	RC0-BT0812-250900-032-e07 BT0812 Homo sapiens cDNA
7879	20421	33330	0.91	3.0E-03	BF333058.1	EST_HUMAN	RC0-BT0812-250900-032-e07 BT0812 Homo sapiens cDNA
8097	20638	33549	4.71	3.0E-03	N92580.1	EST_HUMAN	zb27b04.s1 Soares_parathyroid_tumor_NhrHPA Homo sapiens cDNA clone IMAGE:304783 3'
8257	20798		0.55	3.0E-03	M63498.1	NT	S.cerevisiae UGA35 gene, complete cds
8397	20937	33860	1.11	3.0E-03	P51989	SWISSPROT	HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN A2 HOMOLOG 1 (HNRNP A2(A))
8419	20959	33877	1.31	3.0E-03	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C068
8522	21081		1.37	3.0E-03	Q9QM81	SWISSPROT	NONSTRUCTURAL PROTEIN V
8922	21460		12.62	3.0E-03	AW613774.1	EST_HUMAN	hh80f10.x1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2969131 3' similar to contains L1.11 L1 repetitive element;
8975	21513	34436	4.44	3.0E-03	AL161589.2	NT	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 85

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8999	21536	34466	6.98	3.0E-03	AI018731.1	EST_HUMAN	ov03d12.x1 NCL_CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1636247 3' similar to gb:X57138_rna1
9008	21545	34474	0.92	3.0E-03	BF338078.1	EST_HUMAN	HISTONE H2B.2 (HUMAN);
9330	21844		1	3.0E-03	D80901.1	NT	60203580F1 NCL_CGAP_Brn64 Homo sapiens cDNA clone IMAGE:4183838 5'
9368	20307	33210	0.66	3.0E-03	BE154870.1	EST_HUMAN	Synechocystis sp. PCC6803 complete genome, 3/27, 271800-402289
9554	22054		0.67	3.0E-03	P03355	SWISSPROT	PM3-P10344-071289-003-d07 HT0344 Homo sapiens cDNA
9623	22123		5.92	3.0E-03	P08672	SWISSPROT	POL POLYPROTEIN [CONTAINS: PROTEASE; REVERSE TRANSCRIPTASE; RIBONUCLEASE H]
							CIRCUMSPOROZOITE PROTEIN PRECURSOR (CS)
							RETROVIRUS-RELATED POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE; ENDONUCLEASE]
9809	22307	35291	1.58	3.0E-03	P11369	SWISSPROT	HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN A2 HOMOLOG 1 (HNRNP A2(A))
9907	22404	35379	1.3	3.0E-03	P51989	SWISSPROT	Homo sapiens chromosome 21 segment HS21C103
10048	22541	35538	3.96	3.0E-03	AL163303.2	NT	Homo sapiens ATP/GTP-binding protein (HEAB), mRNA
10728	23254		4.26	3.0E-03	5803028	NT	Pneumocystis carinii kexn-like serine endoprotease mRNA, partial cds
11257	23787	36943	2.21	3.0E-03	AF009222.1	NT	Homo sapiens galin-like protein (GLP) gene, complete cds
11321	23019	36028	1.99	3.0E-03	AF266285.1	NT	Homo sapiens galin-like protein (GLP) gene, complete cds
11354	23808	36987	3.96	3.0E-03	AF094481.1	NT	Homo sapiens trinucleotide repeat DNA binding protein p20-CGGBP (CGGBP) gene, complete cds
11354	23808	36988	3.96	3.0E-03	AF094481.1	NT	Homo sapiens trinucleotide repeat DNA binding protein p20-CGGBP (CGGBP) gene, complete cds
11707	24869		2.32	3.0E-03	AI525056.1	EST_HUMAN	promina-5.E07.7 bvtumor Homo sapiens cDNA 5'
							ot77b10.s1 Soares total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:1622779 3' similar to
11743	24142	36763	1.31	3.0E-03	AA993154.1	EST_HUMAN	contains L1.13 MER26 repetitive element;
11804	25007		1.81	3.0E-03	AB009698.1	NT	Homo sapiens gene for CMP-N-acetylneuraminic acid hydroxylase, partial cds
11888	24288	30984	2.87	3.0E-03	AJ296282.1	NT	Rattus norvegicus mRNA for connexin36 (cx36 gene)
541	13172	25651	0.8	2.0E-03	Q04652	SWISSPROT	RING CANAL PROTEIN (KELCH PROTEIN)
541	13172	25652	0.8	2.0E-03	Q04652	SWISSPROT	RING CANAL PROTEIN (KELCH PROTEIN)
818	15426		11.05	2.0E-03	T70874.1	EST_HUMAN	y415h03.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:108341 5'
1407	14000	26528	2.25	2.0E-03	M20783.1	NT	Human alpha-2-plasmin inhibitor gene, exons 6 and 7
1410	14003	26531	1.35	2.0E-03	AA661605.1	EST_HUMAN	nu8601.s1 NCL_CGAP_Ak1 Homo sapiens cDNA clone IMAGE:1217593
1418	14011	26540	20.96	2.0E-03	AF284446.1	NT	Homo sapiens tumor-related protein DRC2 (DRC2) gene, complete cds
							PLATELET-ENDOTHELIAL TETRASPAN ANTIGEN 3 (PETA-3) (GP27) (MEMBRANE GLYCOPROTEIN SFA-1) (CD151 ANTIGEN)
1536	14128	26664	1.04	2.0E-03	P48509	SWISSPROT	Homo sapiens procollagen-lysine, 2-oxoglutarate 5-dioxygenase (lysine hydroxylase, Ehlers-Danlos syndrome type VI) (PLOD) mRNA
1563	14155	26686	2.05	2.0E-03	4557836	NT	Homo sapiens procollagen-lysine, 2-oxoglutarate 5-dioxygenase (lysine hydroxylase, Ehlers-Danlos syndrome type VI) (PLOD) mRNA
1563	14155	26687	2.05	2.0E-03	4557836	NT	Homo sapiens procollagen-lysine, 2-oxoglutarate 5-dioxygenase (lysine hydroxylase, Ehlers-Danlos syndrome type VI) (PLOD) mRNA
1635	14227		5.58	2.0E-03	P29400	SWISSPROT	COLLAGEN ALPHA 5(V) CHAIN PRECURSOR

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1807	14397	26942	1.01	2.0E-03	AA450138.1	EST_HUMAN	z42a10.1 Soares, total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:789114 5'
1922	14607		0.89	2.0E-03	BE144908.1	EST_HUMAN	GM2-HT0183-061059-018-403 HT0183 Homo sapiens cDNA
2038	14620	27188	1.25	2.0E-03	AF302691.1	NT	Mus musculus myelin expression factor-3-like protein gene, partial cds
2261	14865	27440	0.97	2.0E-03	AL163302.2	NT	Homo sapiens chromosome 21 segment HS21C102
2615	15177		4.13	2.0E-03	AW137782.1	EST_HUMAN	UI-H-B11-adi-g-10-Q-UI.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2717010 3'
3463	16070	28543	4.95	2.0E-03	AA450138.1	EST_HUMAN	z42a10.1 Soares, total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:789114 5'
3470	16076	28549	0.76	2.0E-03	BF568955.1	EST_HUMAN	602183980T1 NIH_MGC_42 Homo sapiens cDNA clone IMAGE:4300070 3'
3729	16330	28796	5.87	2.0E-03	X87344.1	NT	H.sapiens DMA, DMB, HLA-Z1, IP2, LMP2, TAP1, LMP7, TAP2, DOB, DQB2 and RING8, 9, 13 and 14 genes
4024	16622	29094	0.89	2.0E-03	AB040802.1	NT	Rattus norvegicus mRNA for SREB1, complete cds
4191	16780	29228	2.48	2.0E-03	P03374	SWISSPROT	ENV POLYPROTEIN [CONTAINS: COAT PROTEIN GP52; COAT PROTEIN GP36]
4302	16888		12.85	2.0E-03	U68491.1	NT	Rattus norvegicus 5-hydroxytryptamine7 receptor gene, partial cds
4502	17086		1.09	2.0E-03	L35079.1	NT	Porcine rotavirus major outer capsid protein (VP7) mRNA, complete cds
4518	17102		1.34	2.0E-03	AW297380.1	EST_HUMAN	UI-H-BW0-aii-g-03-Q-UI.s1 NCI_CGAP_Sub6 Homo sapiens cDNA clone IMAGE:2730413 3'
4523	17107	29553	0.96	2.0E-03	AI064746.1	EST_HUMAN	HA0507 Human fetal liver cDNA library Homo sapiens cDNA
4844	17228	29680	1.82	2.0E-03	L42512.1	NT	Drosophila melanogaster shortighted class 2 (shc) mRNA, complete cds
4844	17228	29681	1.82	2.0E-03	L42512.1	NT	Drosophila melanogaster shortighted class 2 (shs) mRNA, complete cds
4821	17399		1.92	2.0E-03	R87773.1	EST_HUMAN	y045e02.s1 Soares adult brain N2b4HB55Y Homo sapiens cDNA clone IMAGE:180890 3'
4848	17426	29878	5.2	2.0E-03	AA909466.1	EST_HUMAN	d14f05.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1523457 3'
5167	17736	30163	0.81	2.0E-03	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
5428	17985		0.9	2.0E-03	AF205067.1	NT	Desulfotribio desulfuricans cytochrome c3 precursor (cycA) gene, complete cds
5678	18305	30787	1.16	2.0E-03	BF241410.1	EST_HUMAN	601876385F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4104692 5'
5810	24749	31156	2.28	2.0E-03	AB014593.1	NT	Homo sapiens mRNA for KIAA0693 protein, partial cds
5887	18510	31236	2.11	2.0E-03	U63711.1	NT	Xenopus laevis xefitin mRNA, complete cds
6258	18867	31636	4.06	2.0E-03	P23477	SWISSPROT	ATP-DEPENDENT NUCLEASE SUBUNIT B
6258	18867	31637	4.06	2.0E-03	P23477	SWISSPROT	ATP-DEPENDENT NUCLEASE SUBUNIT B
6486	19087	31869	2.38	2.0E-03	Q95203	SWISSPROT	CARBONIC ANHYDRASE-RELATED PROTEIN 2 PRECURSOR (CARP 2) (CA-XI)
6486	19087	31870	2.38	2.0E-03	Q95203	SWISSPROT	CARBONIC ANHYDRASE-RELATED PROTEIN 2 PRECURSOR (CARP 2) (CA-RP II) (CA-XI)
6488	19089	31872	7	2.0E-03	BF308187.1	EST_HUMAN	601887434F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4121408 5'
6521	19121	31912	2.17	2.0E-03	Q9UKP4	SWISSPROT	ADAM-TS 7 PRECURSOR (A DISINTEGRIN AND METALLOPROTEINASE WITH THROMBOSPONDIN MOTIFS 7) (ADAMTS-7) (ADAM-TS7)
6546	19144	31940	1.46	2.0E-03	X94451.1	NT	L. esculentum mRNA for lysyl-tRNA synthetase (LysRS)



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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6715	19309		2.03	2.0E-03	A1991089.1	EST_HUMAN	wu36h09.x1 Soares_Dieckgraefe_colon_NHCD Homo sapiens cDNA clone IMAGE:2522177 3' similar to SW:RL29_HUMAN P47914 60S RIBOSOMAL PROTEIN L29; contains element MSR1 repetitive element ;
7038	18058	30480	0.99	2.0E-03	AB038502.1	NT	Caenorhabditis elegans mRNA for glectin LEC-11, complete cds
7104	19874	32513	1.54	2.0E-03	5031864	NT	Homo sapiens lipoma HMGIC fusion partner (LHFP) mRNA
7104	19874	32514	1.54	2.0E-03	5031864	NT	Homo sapiens lipoma HMGIC fusion partner (LHFP) mRNA
7141	19521	32343	3.59	2.0E-03	BE067986.1	EST_HUMAN	CM4-B T0366-061299-054-001 B T0366 Homo sapiens cDNA
7198	19729	32580	0.7	2.0E-03	A1298883.1	EST_HUMAN	qm99d11.x1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1886885 3'
7335	19882	32726	0.87	2.0E-03	T86569.1	EST_HUMAN	y477g10.r1 Soares fetal liver spleen 1NfLS Homo sapiens cDNA clone IMAGE:114308 5'
7613	20128	33003	1.49	2.0E-03	P07354	SWISSPROT	PROTEOGLYCAN LINK PROTEIN PRECURSOR (CARTILAGE LINK PROTEIN)(LP)
7995	20537	33440	2.47	2.0E-03	AW592004.1	EST_HUMAN	M37b06.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2834035 3' similar to TR:Q80976 Q80976 JERKY.
8159	20700	33614	5.96	2.0E-03	N20287.1	EST_HUMAN	y42g06.s1 Soares melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:2644442 3' similar to contains L1 b2 L1 repetitive element ;
8159	20700	33615	5.96	2.0E-03	N20287.1	EST_HUMAN	y42g06.s1 Soares melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:2644442 3' similar to contains L1 b2 L1 repetitive element ;
8208	20749	33662	0.52	2.0E-03	Q92350	SWISSPROT	HYPOTHETICAL 32.8 KD PROTEIN C8G9.05 IN CHROMOSOME I
8228	20769	33688	0.94	2.0E-03	P19137	SWISSPROT	LAMININ ALPHA-1 CHAIN PRECURSOR (LAMININ A CHAIN)
8282	20823	33743	0.82	2.0E-03	6005855	NT	Homo sapiens Retina-derived POU-domain factor-1 (RPF-1), mRNA
8282	20823	33744	0.82	2.0E-03	6005855	NT	Homo sapiens Retina-derived POU-domain factor-1 (RPF-1), mRNA
8307	20848	33771	0.8	2.0E-03	AU136679.1	EST_HUMAN	AU136679 PLACE1 Homo sapiens cDNA clone PLACE1004839 5'
8358	20898		2.04	2.0E-03	AJ400877.1	NT	Homo sapiens ASCL3 gene, CEGP1 gene, C11orf14 gene, C11orf15 gene, C11orf16 gene and C11orf17 gene
9123	18508	31233	0.69	2.0E-03	AW796111.1	EST_HUMAN	MR2-UM0025-300300-102-402 UM0025 Homo sapiens cDNA
9123	18508	31234	0.69	2.0E-03	AW796111.1	EST_HUMAN	MR2-UM0025-300300-102-402 UM0025 Homo sapiens cDNA
9164	21899	34643	0.85	2.0E-03	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
9445	21971	34920	0.99	2.0E-03	H50832.1	EST_HUMAN	y98a09.s1 Soares fetal liver spleen 1NfLS Homo sapiens cDNA clone IMAGE:194298 3'
9445	21971	34921	0.99	2.0E-03	H50832.1	EST_HUMAN	y98a09.s1 Soares fetal liver spleen 1NfLS Homo sapiens cDNA clone IMAGE:194298 3'
9477	21876	34823	2.57	2.0E-03	P24821	SWISSPROT	TENASCIN PRECURSOR (TN) (HEXABRACHION) (CYTOTACTIN) (NEURONECTIN) (GMEM) (JI) (MOTENDINOUS ANTIGEN) (GLIOMA-ASSOCIATED-EXTRACELLULAR MATRIX ANTIGEN) (GP 150-225) (TENASCIN-C) (TN-C)
9585	22085	35049	1.03	2.0E-03	P48982	SWISSPROT	BETA-GALACTOSIDASE PRECURSOR (LACTASE)
9585	22085	35050	1.03	2.0E-03	P48982	SWISSPROT	BETA-GALACTOSIDASE PRECURSOR (LACTASE)

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9639	22139	35105	0.54	2.0E-03	AF097732.1	NT	Homo sapiens caspase recruitment domain-containing protein (BCL10) gene, complete cds
9639	22139	35106	0.54	2.0E-03	AF097732.1	NT	Homo sapiens caspase recruitment domain-containing protein (BCL10) gene, complete cds
9828	22327	35308	0.99	2.0E-03	AV884269.1	EST_HUMAN	QV3-OT0084-060400-144-601 OT0084 Homo sapiens cDNA
9855	22450		4.55	2.0E-03	AA251376.1	EST_HUMAN	zs10a08.s1 NCI_CGAP_G0B1 Homo sapiens cDNA clone IMAGE:684754 3'
10894	23415		3.24	2.0E-03	M86524.1	NT	Human dystrophin gene
11361	20126	33003	2.13	2.0E-03	P07354	SWISSPROT	PROTEOGLYCAN LINK PROTEIN PRECURSOR (CARTILAGE LINK PROTEIN) (LP)
11417	23868		2.25	2.0E-03	BF330909.1	EST_HUMAN	RC3-BT0333-310800-115-g04 BT0333 Homo sapiens cDNA
11424	23875	36939	13.97	2.0E-03	Z11740.1	NT	H. sapiens variable number tandem repeat (VNTR) locus DNA
11687	24103		3.17	2.0E-03	AB25745.1	EST_HUMAN	y65h03.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2283989 3' similar to SW:VATG_MANSE
11705	24118	37151	4.77	2.0E-03	AF157516.2	NT	Q25532 VACUOLAR ATP SYNTHASE SUBUNIT G ;
11730	24135	37155	1.94	2.0E-03	A084325.1	EST_HUMAN	Homo sapiens SEL1L (SEL1L) gene, partial cds
11754	18032		8.96	2.0E-03	AJ245167.1	NT	oy43g08.s1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1668634 3' similar to
11967	25050		2.34	2.0E-03	AV697966.1	EST_HUMAN	TR:P97535 P97535 PS-PLA1 PRECURSOR ;
12062	24345	30964	1.49	2.0E-03	Y00508.1	NT	Camelus dromedarius chp19 gene for immunoglobulin heavy chain variable region
							AV697966 GKC Homo sapiens cDNA clone GKCXGD05 5'
							H. sapiens M1 gene for muscarinic acetylcholine receptor
12372	24542		2.06	2.0E-03	AF129756.1	NT	Homo sapiens MSH55 gene, partial cds; and CLIC1, DDAH, G6b, G6c, G6d, G6e, G6f, BAT5, G5b, CSK2B, BAT4, G4, Apo M, BAT3, BAT2, AIF-1, 1C7, LST-1, LTB, TNF, and LTA genes, complete cds
12551	24849		5.07	2.0E-03	AV697966.1	EST_HUMAN	AV697966 GKC Homo sapiens cDNA clone GKCXGD05 5'
464	13098	25569	1.33	1.0E-03	H98471.1	EST_HUMAN	y68c08.r1 Soares_pineal_gland_N3HPG Homo sapiens cDNA clone IMAGE:232334 5'
862	13477	25992	1.47	1.0E-03	A1720263.1	EST_HUMAN	as70b08.x1 Barslead cdon HPLRB7 Homo sapiens cDNA clone IMAGE:2334039 3' similar to TR:Q13825
862	13477	25993	1.47	1.0E-03	A1720263.1	EST_HUMAN	Q13825 AU-BINDING PROTEIN/ENOYL-COA HYDRATASE ;
1134	13737	26246	2.21	1.0E-03	A1865788.1	EST_HUMAN	as70b08.x1 Barslead cdon HPLRB7 Homo sapiens cDNA clone IMAGE:2422258 3'
1154	13757	26267	1.31	1.0E-03	A1954572.1	EST_HUMAN	Q13825 AU-BINDING PROTEIN/ENOYL-COA HYDRATASE ;
1208	13808	26321	1.67	1.0E-03	A1692616.1	EST_HUMAN	as70b08.x1 Barslead cdon HPLRB7 Homo sapiens cDNA clone IMAGE:2334039 3' similar to TR:Q13825
2074	14654	27227	4.05	1.0E-03	P47808	SWISSPROT	Q13825 AU-BINDING PROTEIN/ENOYL-COA HYDRATASE ;
2199	14775	27348	9.99	1.0E-03	AJ131016.1	NT	High MOLECULAR WEIGHT FORM OF MYOSIN I (HMWMI)
3008	15624	28102	1.45	1.0E-03	AB033117.1	NT	Homo sapiens SCL gene locus
3225	15837	28315	1.81	1.0E-03	P18915	SWISSPROT	Homo sapiens mRNA for KIAA1291 protein, partial cds
							CARBONIC ANHYDRASE VI PRECURSOR (CARBONATE DEHYDRATASE VI) (CA-VI) (SECRETED CARBONIC ANHYDRASE) (SALIVARY CARBONIC ANHYDRASE)

Table 4  
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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3225	15837	28316	1.81	1.0E-03	P18915	SWISSPROT	CARBONIC ANHYDRASE VI PRECURSOR (CARBONATE DEHYDRATASE VI) (CA-VI) (SECRETED CARBONIC ANHYDRASE) (SALIVARY CARBONIC ANHYDRASE)
3341	15951	28427	0.79	1.0E-03	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
3596	16200	28683	0.65	1.0E-03	U68061.1	NT	Human MUC2 gene, promoter region
3596	16200	28684	0.65	1.0E-03	U68061.1	NT	Human MUC2 gene, promoter region
3727	16328		1.31	1.0E-03	AB044400.1	NT	Human MUC2 gene, promoter region
3997	16595	29067	0.75	1.0E-03	AW170552.1	EST_HUMAN	Homo sapiens SVMT gene for synaptic vesicle monoamine transporter, exons 14, 15
4008	16606	29080	0.81	1.0E-03	Z49549.1	NT	contains TAR1.11 TAR1 repetitive element ;
4528	17112	28556	4.29	1.0E-03	BE939162.1	EST_HUMAN	S cerevisiae chromosome X reading frame ORF YJR149w
4574	17157	29601	5.77	1.0E-03	BE246536.1	EST_HUMAN	RC1-TN0128-160800-021-g01 TN0128 Homo sapiens cDNA
4770	17351	29803	0.83	1.0E-03	U29449.1	NT	TCBAP1D4809 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP4809
4950	17525	29966	2.83	1.0E-03	A1073485.1	EST_HUMAN	Ceenorhabditis elegans spliced leader RNA (SL3 alpha), (SL4), and (SL5) genes
4950	17525	29967	2.83	1.0E-03	A1073485.1	EST_HUMAN	ov45c04.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1640262 3'
4951	17526		5.92	1.0E-03	BE154067.1	EST_HUMAN	ov45c04.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1640262 3'
5236	17800	30219	11.45	1.0E-03	O46409	SWISSPROT	PMO-HT0339-200400-010-D02 HT0339 Homo sapiens cDNA
5511	18144	30556	2.02	1.0E-03	AA290951.1	EST_HUMAN	APOLIPOPROTEIN A-IV PRECURSOR (APO-AIV)
5598	18228	30676	2.74	1.0E-03	AJ006345.1	NT	zs44f01.1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:700345 5'
5647	18275	30749	1.7	1.0E-03	K03332.1	NT	Homo sapiens KVLQ11 gene
5647	18275	30750	1.7	1.0E-03	K03332.1	NT	Epstein-Barr virus (AG876 isolate) U2-IR2 domain encoding nuclear protein EBNA2, complete cds
5761	18387	31101	0.92	1.0E-03	BE796491.1	EST_HUMAN	Epstein-Barr virus (AG876 isolate) U2-IR2 domain encoding nuclear protein EBNA2, complete cds
5766	18392	31105	1.72	1.0E-03	Q02388	SWISSPROT	601589841F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943954 5'
6171	18783		2.62	1.0E-03	X07699.1	NT	COLLAGEN ALPHA 1(VII) CHAIN PRECURSOR (LONG-CHAIN COLLAGEN) (LC COLLAGEN)
6209	18819	31590	1.1	1.0E-03	BE963939.2	EST_HUMAN	Mouse nucleolin gene
6339	18945		8.29	1.0E-03	11526176	NT	601657519R1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3875693 3'
6476	19077	31860	1.21	1.0E-03	T87761.1	EST_HUMAN	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1), mRNA
6541	19140		1.4	1.0E-03	AW602585.1	EST_HUMAN	y483a11.1 Soares fetal liver spleen 1N1FLS Homo sapiens cDNA clone IMAGE:115772 5'
6852	19441	32256	1.31	1.0E-03	L77570.1	NT	QV3-NN1024-260400-171-g05 NN1024 Homo sapiens cDNA
7208	19737	32590	2.48	1.0E-03	D16826.1	NT	Homo sapiens DiGeorge syndrome critical region, centromeric end
7498	20021		1.72	1.0E-03	AJ226042.1	NT	Human gene for fourth somatostatin receptor subtype
							Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 2/3
							Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Ca2+/Calmodulin-dependent protein kinase 1 (CAMK1), creatine transporter (CRT), CDM protein (CDM), adrenoleukodystrophy protein >
7635	20147	33030	1.7	1.0E-03	U52111.2	NT	

Table 4

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7694	20203	33090	3.21	1.0E-03	M63376.1	NT	Human TRPM-2 protein gene, exons 1,2 and 3
7734	20242	33133	1.13	1.0E-03	BE880044.1	EST_HUMAN	601491081F1 NIH_MGC_89 Homo sapiens cDNA clone IMAGE:3893276 5'
7830	20372	33279	0.57	1.0E-03	AF274581.1	NT	Homo sapiens prolactin-releasing peptide receptor gene, 5' flanking region
7891	20433	33342	5.79	1.0E-03	AJ251973.1	NT	Homo sapiens partial steerin-1 gene
8085	20627	33541	1.29	1.0E-03	AA122270.1	EST_HUMAN	z897c08.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:490768 3' similar to contains L1, L1 repetitive element;
8186	20727	33639	2.03	1.0E-03	AF153980.1	NT	Homo sapiens exostosin-like protein 1 (EXTL1) gene, exons 2 through 11, and complete cds
8369	20909	33828	0.81	1.0E-03	U29397.1	NT	Rattus norvegicus plasma membrane Ca2+ ATPase isoform 3 (PMCA3) gene, 5' flanking region
8530	21069	33988	0.52	1.0E-03	AA001613.1	EST_HUMAN	zh82e08.s1 Soares_fetal_liver_1NFLS_S1 Homo sapiens cDNA clone IMAGE:427810 3'
8530	21069	33989	0.52	1.0E-03	AA001613.1	EST_HUMAN	zh82e08.s1 Soares_fetal_liver_1NFLS_S1 Homo sapiens cDNA clone IMAGE:427810 3'
8873	21412		1.29	1.0E-03	Y11204.1	NT	V.carleri gene encoding volvoxopsin
8900	21438	34381	0.59	1.0E-03	AW840353.1	EST_HUMAN	CM3-L T0079-170200-092-e07 L T0079 Homo sapiens cDNA
9009	21546		0.68	1.0E-03	U52111.2	NT	Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Ca2+/Calmodulin-dependent protein kinase I (CAMKI), creatine transporter (CTR), CDM protein (CDM), adrenoleukodystrophy protein >
9047	21584	34514	3.37	1.0E-03	M30471.1	NT	Human class III alcohol dehydrogenase (ADH5) chi subunit mRNA, complete cds
9047	21584	34515	3.37	1.0E-03	M30471.1	NT	Human class III alcohol dehydrogenase (ADH5) chi subunit mRNA, complete cds
9525	22025	34982	1.96	1.0E-03	AF011400.1	NT	Thermotoga neapolitana alpha-1,6-galactosidase (aglA) gene, complete cds
9525	22025	34983	1.96	1.0E-03	AF011400.1	NT	Thermotoga neapolitana alpha-1,6-galactosidase (aglA) gene, complete cds
9734	22232	35210	0.94	1.0E-03	Q01129	SWISSPROT	BONE PROTEOGLYCAN II PRECURSOR (PG-S2)(DECORIN)(PG40) (DERMATAN SULFATE PROTEOGLYCAN-II) (DSPG)
10068	22563	35558	0.57	1.0E-03	AF003529.1	NT	Homo sapiens glypican 3 (GPC3) gene, partial cds and flanking repeat regions
10073	22568		0.75	1.0E-03	AF097485.1	NT	Homo sapiens transducin beta-like 2 (TBL2) gene, complete cds
10218	22713	35705	1.25	1.0E-03	AI024350.1	EST_HUMAN	ov75f08.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1843175 3' similar to contains MER39.b1 MER39 MER39 repetitive element;
10545	23082	36095	1.71	1.0E-03	AW382393.1	EST_HUMAN	RC1-CT0279-181099-011-a09 CT0279 Homo sapiens cDNA
10545	23082	36096	1.71	1.0E-03	AW382393.1	EST_HUMAN	RC1-CT0279-181099-011-a09 CT0279 Homo sapiens cDNA
10629	23161	36173	3.2	1.0E-03	BE170859.1	EST_HUMAN	QV3-HT0543-220300-130-a03 HT0543 Homo sapiens cDNA
10703	23232		3.19	1.0E-03	AI583847.1	EST_HUMAN	tt73e12.x1 NCL_CGAP_HSC3 Homo sapiens cDNA clone IMAGE:2248446 3' similar to TR:Q28195 Q28195 PVA1 GENE;
11036	23550		3.78	1.0E-03	AV759949.1	EST_HUMAN	AV759949 MDS Homo sapiens cDNA clone MDSDDF11 5'
11682	24099	37149	4.46	1.0E-03	BE894488.1	EST_HUMAN	601433087F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3918524 5'
12149	24392	30974	1.27	1.0E-03	9507208	NT	Rattus norvegicus transformation related protein 63 (Trp63), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
12175	25030		5.99	1.0E-03	A1347355.1	EST_HUMAN	tc05h11.x1 NCI_CGAP_Co16 Homo sapiens cDNA clone IMAGE:2063013 3' similar to contains Alu repetitive element.
12282	25052	30510	5.72	1.0E-03	BE780572.1	EST_HUMAN	601468878F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3872035 5'
5862	18484		1.63	9.0E-04	P06727	SWISSPROT	APOLIPOPROTEIN A-IV PRECURSOR (APO-AIV)
6812	18209	32017	1.06	9.0E-04	P02381	SWISSPROT	MITOCHONDRIAL RIBOSOMAL PROTEIN VAR1
9561	22081		1.56	9.0E-04	AB037203.1	NT	Glycylrhiza glabra GgBaS1 mRNA for beta-amylin synthase, complete cds
1535	14127		1.05	8.0E-04	X98469.1	NT	Xlaevis mRNA for C4SR protein
4259	16845		5.17	8.0E-04	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
4880	17455	28908	2.55	8.0E-04	U28185.1	NT	Homo sapiens prion protein (PrP) gene, complete cds
11024	23538		2.15	8.0E-04	AA777084.1	EST_HUMAN	z24c10.s1 Soares_fetal_heart_NHH19W Homo sapiens cDNA clone IMAGE:377874 3'
11175	23682		2.5	8.0E-04	AB571099.1	EST_HUMAN	tr85a08.x1 NCI_CGAP_UJ2 Homo sapiens cDNA clone IMAGE:2176310 3'
12500	24628	30892	1.65	8.0E-04	AW578954.1	EST_HUMAN	PM2-HT0353-130100-002-F10 HT0353 Homo sapiens cDNA
1867	14453	27012	0.99	7.0E-04	L41825.1	NT	Homo sapiens CYP17 gene, 5' end
2442	15009	27681	0.92	7.0E-04	U28185.1	NT	Homo sapiens prion protein (PrP) gene, complete cds
2739	15284	27881	1.75	7.0E-04	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
3319	15929	28406	1.23	7.0E-04	4885170	NT	Homo sapiens chromosome X open reading frame 6 (CXORF6) mRNA
6246	18855	31626	0.75	7.0E-04	AA516212.1	EST_HUMAN	ng65g12.s1 NCI_CGAP_Lip2 Homo sapiens cDNA clone IMAGE:839718 similar to contains L1.b3 L1 L1 repetitive element.
6838	19232		2.63	7.0E-04	AT698331.1	EST_HUMAN	wg36f09.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2367209 3'
7279	19807		0.79	7.0E-04	AK024445.1	NT	Homo sapiens mRNA for FLJ00035 protein, partial cds
9719	22217	35191	0.57	7.0E-04	P13497	SWISSPROT	BONE MORPHOGENETIC PROTEIN 1 PRECURSOR (BMP-1)
9719	22217	35192	0.57	7.0E-04	P13497	SWISSPROT	BONE MORPHOGENETIC PROTEIN 1 PRECURSOR (BMP-1)
11440	23890		3.42	7.0E-04	U78027.1	NT	Homo sapiens Bruton's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3) genes, complete cds
11463	23913	36980	2.68	7.0E-04	Z40561.1	EST_HUMAN	HSC28A072 normalized infant brain cDNA Homo sapiens cDNA clone c-28a07 3'
12222	24443		11.57	7.0E-04	BE077941.1	EST_HUMAN	CM1-BT0614-110300-142-b12 BT0614 Homo sapiens cDNA
12472	24597		4.94	7.0E-04	R17336.1	EST_HUMAN	yg13c06.r1 Soares infant brain IN1B Homo sapiens cDNA clone IMAGE:32288 5'
12505	24628		7.97	7.0E-04	6005855	NT	Homo sapiens Relina-derived POU-domain factor-1 (RPF-1), mRNA
2720	15278		0.93	6.0E-04	BF341380.1	EST_HUMAN	802013339F1 NCI_CGAP_Bm64 Homo sapiens cDNA clone IMAGE:4149287 5'
4033	16631	28100	1.61	6.0E-04	AB62525.1	EST_HUMAN	w15a11.x1 NCI_CGAP_Kd12 Homo sapiens cDNA clone IMAGE:2402876 3'
4163	16754	28205	0.6	6.0E-04	K01315.1	NT	Homo sapiens epsilon-1 pseudogene (IGHEP1) gene, 5' flanking region
4163	16754	29208	0.6	6.0E-04	K01315.1	NT	Homo sapiens epsilon-1 pseudogene (IGHEP1) gene, 5' flanking region
4264	16850	28298	3.2	6.0E-04	U45983.1	NT	Homo sapiens CCR8 chemokine receptor (CMKBR8) gene, complete cds
4538	17122	28567	0.93	6.0E-04	BE173435.1	EST_HUMAN	RC2-HT0560-190200-011-f09 HT0560 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4538	17122	29568	0.93	6.0E-04	BE173435.1	EST_HUMAN	RC2-HT0560-190200-011-109 HT0560 Homo sapiens cDNA
5413	17970	30379	0.9	6.0E-04	A1906667.1	EST_HUMAN	RC-BT122-180399-057 BT122 Homo sapiens cDNA
5413	17970	30380	0.9	6.0E-04	A1906667.1	EST_HUMAN	RC-BT122-180399-057 BT122 Homo sapiens cDNA
7807	20350		3.04	6.0E-04	P48408	SWISSPROT	GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE (FRUCTOSE TRANSPORTER)
7958	20500		0.67	6.0E-04	H92847.1	EST_HUMAN	y94c11.s1 Soares_pineal_gland_N3HPG Homo sapiens cDNA clone IMAGE:231956 3' similar to contains LOR1 repetitive element
9890	22387		3.74	6.0E-04	AL048507.2	EST_HUMAN	DKFZp586M2024_r1 586 (synonym: huter1) Homo sapiens cDNA clone DKFZp586M2024
9924	22420		0.77	6.0E-04	A1858286.1	EST_HUMAN	w35g02.x1 NCL_CGAP_U1 Homo sapiens cDNA clone IMAGE:2428930 3'
9992	22487	35475	2.18	6.0E-04	BE005850.1	EST_HUMAN	RC2-BN0120-250400-012-h11 BN0120 Homo sapiens cDNA
10242	22737		0.64	6.0E-04	AF287478.1	NT	Lytichinus variegatus embryonic blastocoelar extracellular matrix protein precursor (ECM3) mRNA, complete cds
11358	23812	36872	2.9	6.0E-04	AJ229042.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 2/3
11441	23891	36956	5.11	6.0E-04	AW013847.1	EST_HUMAN	UI-H-B10-aab-e-09-0-UI.s1 NCL_CGAP_Sub1 Homo sapiens cDNA clone IMAGE:2708825 3'
11495	23944		2.28	6.0E-04	Q01768	SWISSPROT	NUCLEOSIDE DIPHOSPHATE KINASE B (NDK B) (NDP KINASE B) (NM23-M2) (P18)
11869	24928		3.55	6.0E-04	AW380519.1	EST_HUMAN	RC1-HT0269-261199-012-008 HT0269 Homo sapiens cDNA
12671	24739		1.61	6.0E-04	A1817088.1	EST_HUMAN	wj76g11.x1 NCL_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2408804 3' similar to contains element L1 repetitive element
679	13303	25785	8.64	5.0E-04	O10341	SWISSPROT	HYPOTHETICAL 29.3 KD PROTEIN (ORF92)
1549	14141		1.68	5.0E-04	AW851844.1	EST_HUMAN	QV0-CT0225-021099-030-a07 CT0225 Homo sapiens cDNA
3460	16067	28540	1.53	5.0E-04	AA548931.1	EST_HUMAN	nk27e11.s1 NCL_CGAP_Cot11 Homo sapiens cDNA clone IMAGE:1014764 3' similar to contains Alu repetitive element
3778	16378	28843	1.02	5.0E-04	Q9UKP4	SWISSPROT	ADAM-TS 7 PRECURSOR (A DISINTEGRIN AND METALLOPROTEINASE WITH THROMBOSPONDIN MOTIFS 7) (ADAMTS-7) (ADAM-TS7)
5664	18291	30770	1.98	5.0E-04	AF248054.1	NT	Bos taurus micromolar calcium activated neutral protease 1 (CAPN1) gene, exons 11-20, and partial cds
6740	19334	32141	6.37	5.0E-04	AA156080.1	EST_HUMAN	zo33b08.r1 Stratagene colon (#937204) Homo sapiens cDNA clone IMAGE:588663 5'
7411	19936	32801	16.91	5.0E-04	M23604.1	NT	Gorilla gorilla involucrin gene medium allele, complete cds
7898	20440	33346	4.97	5.0E-04	A1188382.1	EST_HUMAN	qd13f06.x1 Soares_placenta_8tcdweeks_2NBHP8tcdw Homo sapiens cDNA clone IMAGE:1723619 3' similar to gb:X51602.cds1 VASCULAR ENDOTHELIAL GROWTH FACTOR RECEPTOR 1 (HUMAN); contains Alu repetitive element
8245	20786	33705	0.91	5.0E-04	AA814519.1	EST_HUMAN	ob96e02.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1339226 3' similar to contains element MER22 repetitive element
9201	21718	34682	1.37	5.0E-04	AA846545.1	EST_HUMAN	aj56h03.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1394357 3'

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Table 4

Single Exon Probes Expressed In Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9293	21893	34840	0.6	5.0E-04	N83765.1	EST_HUMAN	KK2745F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone KK2745 5' similar to REPTITIVE ELEMENT
9437	21963	34812	0.65	5.0E-04	P29126	SWISSPROT	BIFUNCTIONAL ENDO-1,4-BETA-XYLANASE Xyla PRECURSOR
9527	22027	34986	4.43	5.0E-04	AW270938.1	EST_HUMAN	xs06e02.x1 NCI CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2768958 3'
10855	23376		4.52	5.0E-04	AL048507.2	EST_HUMAN	DKFZp586M2024_r1 588 (synonym: hute1) Homo sapiens cDNA clone DKFZp586M2024
11559	19281	30770	11.05	5.0E-04	AF248054.1	NT	Bos taurus micromolar calcium activated neutral protease 1 (CAPN1) gene, exons 11-20, and partial cds
11631	19336	32801	1.84	5.0E-04	M23604.1	NT	Gorilla gorilla inducible gene medium allele, complete cds
11809	24857		3.21	5.0E-04	AA568513.1	EST_HUMAN	nt15ho2.s1 NCI CGAP_P11 Homo sapiens cDNA clone IMAGE:913875
12353	24883		1.77	5.0E-04	U63834.1	NT	Human KIT protein and alternatively spliced KIT protein (KIT) gene, complete cds
415	13050		0.64	4.0E-04	BF241482.1	EST_HUMAN	601876534F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4104897 5'
701	13323	25810	1.12	4.0E-04	U32748.1	NT	Haemophilus influenzae Rd section 63 of 163 of the complete genome
880	13494	26012	1.46	4.0E-04	AI720263.1	EST_HUMAN	as70b08.x1 Barstead colon HPLRB7 Homo sapiens cDNA clone IMAGE:2334039 3' similar to TR:Q13825
880	13494	26013	1.46	4.0E-04	AI720263.1	EST_HUMAN	Q13825 AU-BINDING PROTEIN/ENOVYL-COA HYDRATASE. ;
1514	14108	26842	9.82	4.0E-04	AW753356.1	EST_HUMAN	as70b08.x1 Barstead colon HPLRB7 Homo sapiens cDNA clone IMAGE:2334039 3' similar to TR:Q13825
2130	14708	27280	1.59	4.0E-04	AL163278.2	EST_HUMAN	Q13825 AU-BINDING PROTEIN/ENOVYL-COA HYDRATASE. ;
2179	14756		1.34	4.0E-04	AL046704.1	NT	RC3-CT0254-130100-023-r01 CT0254 Homo sapiens cDNA
2658	15215	27787	1.83	4.0E-04	O66615	SWISSPROT	Homo sapiens chromosome 21 segment HS21C078
3200	15612	28286	2.59	4.0E-04	AF281074.1	NT	DKFZp434D059_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434D059 5'
3405	16014	28493	0.58	4.0E-04	AV696824.1	EST_HUMAN	SERPIN-2 (SILK GUM PROTEIN 2)
3935	16533		0.94	4.0E-04	AL163267.2	NT	Homo sapiens neuropilin 2 (NRP2) gene, complete cds, alternatively spliced
4415	17000	29442	3.2	4.0E-04	AA576331.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C067
4415	17000	29443	3.2	4.0E-04	AA576331.1	EST_HUMAN	nh10a10.s1 NCI CGAP_Co1 Homo sapiens cDNA clone IMAGE:951930 3' similar to gb:M21121 T-CELL
4635	17218	28871	1.94	4.0E-04	AA086324.1	EST_HUMAN	SPECIFIC RANTES PROTEIN PRECURSOR (HUMAN);
5249	17812	30235	6.04	4.0E-04	BE560680.1	EST_HUMAN	nh10a10.s1 NCI CGAP_Co1 Homo sapiens cDNA clone IMAGE:951930 3' similar to gb:M21121 T-CELL
7312	18940	32699	1.25	4.0E-04	P48442	SWISSPROT	ztr61c08.s1 Stratagene muscle 937209 Homo sapiens cDNA clone IMAGE:562670 3'
7541	20061		2.42	4.0E-04	AL161566.2	NT	601345995F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3679910 5'
8473	21013	33929	1.42	4.0E-04	BF240712.1	EST_HUMAN	EXTRACELLULAR CALCIUM-SENSING RECEPTOR PRECURSOR (CASR) (PARATHYROID CELL CALCIUM-SENSING RECEPTOR)
8481	21020	33935	1.85	4.0E-04	N25507.1	EST_HUMAN	Arabidopsis thaliana DNA chromosome 4, contig fragment No. 68
							601875985F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4099700 5'
							yx39e12.r1 Soares melanocyte 2NBHM Homo sapiens cDNA clone IMAGE:284142 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9608	22108	35070	2.79	4.0E-04	AI025696.1	EST_HUMAN	ov87h03.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1644341 3'
9754	22252		1.22	4.0E-04	AF022855.1	NT	Mus musculus neuropilin-2(a17) mRNA, alternatively spliced, complete cds
12186	24833		2.4	4.0E-04	AF254822.1	NT	Homo sapiens SMARCA4 isoform (SMARCA4) gene, complete cds, alternatively spliced
167	12830	25316	2.71	3.0E-04	AL119426.1	EST_HUMAN	DKFZp761J221_r1 761 (synonym: hemy2) Homo sapiens cDNA clone DKFZp761J221 5'
209	12830	25356	3.63	3.0E-04	P49259	SWISSPROT	180 KD SECRETORY PHOSPHOLIPASE A2 RECEPTOR PRECURSOR (PLA2-R)
913	13526	26045	1.72	3.0E-04	U83991.1	NT	Human short chain acyl CoA dehydrogenase gene, exons 1 and 2
1879	14465	27022	5.5	3.0E-04	AI282100.1	EST_HUMAN	qz28d03.y1 NCJ CGAP Kid11 Homo sapiens cDNA clone IMAGE:2028197 5'
1894	14479		1.08	3.0E-04	AI399674.1	EST_HUMAN	th23a02.x1 NCJ CGAP P128 Homo sapiens cDNA clone IMAGE:2119082 3'
3349	15958	28434	4.95	3.0E-04	P25147	SWISSPROT	INTERNALIN B PRECURSOR
4036	16634	29103	3.07	3.0E-04	P49448	SWISSPROT	GLUTAMATE DEHYDROGENASE 2 PRECURSOR (GDH)
4131	16723		1.37	3.0E-04	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
4167	16788		1.14	3.0E-04	BE140609.1	EST_HUMAN	RCO-HT0014-310598-028 HT0014 Homo sapiens cDNA
4941	17516		5.05	3.0E-04	BE153778.1	EST_HUMAN	PMO-HT0339-190200-007-g12 HT0339 Homo sapiens cDNA
5162	17731	30156	0.57	3.0E-04	Q09472	SWISSPROT	E1A-ASSOCIATED PROTEIN P300
6292	18900		5.93	3.0E-04	AL163281.2	NT	Homo sapiens chromosome 21 segment HS21C081
6909	19568	32395	1.67	3.0E-04	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
7590	20105	32981	1.04	3.0E-04	P23488	SWISSPROT	PROTEIN-TYROSINE PHOSPHATASE DELTA PRECURSOR (R-PTP-DELTA)
8202	20743	33656	6.76	3.0E-04	P22607	SWISSPROT	FIBROBLAST GROWTH FACTOR RECEPTOR 3 PRECURSOR (FGFR-3)
9834	22332	35313	1.46	3.0E-04	AA454055.1	EST_HUMAN	zx48d08.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:795471 5' similar to gb:M62762
10080	22575	35570	0.5	3.0E-04	AI692139.1	EST_HUMAN	wf75a11.x1 Soares_thymus_NHT Homo sapiens cDNA clone IMAGE:2513276 3'
10356	22850	35844	8.78	3.0E-04	AA781201.1	EST_HUMAN	a24g05.s1 Soares_testis_NHT Homo sapiens cDNA clone 1391288 3' similar to gb:M36072 60S
11758	25072	30514	3.55	3.0E-04	AA228301.1	EST_HUMAN	nc38e04.r1 NCJ CGAP P12 Homo sapiens cDNA clone IMAGE:1010430 similar to contains L1.12 L1
12140	24909	30713	4.29	3.0E-04	AB018292.1	NT	repetitive element ;
12574	24671		3.54	3.0E-04	AL134483.1	EST_HUMAN	Homo sapiens mRNA for KIAA0749 protein, partial cds
187	12848	25333	1.23	2.0E-04	AF217796.1	NT	DKFZp547L185_r1 547 (synonym: hbr1) Homo sapiens cDNA clone DKFZp547L185 5'
504	13136	25624	2.86	2.0E-04	AU146707.1	EST_HUMAN	Homo sapiens SCG10 like-protein, helicase-like protein NHL, M68, and ADP-ribosylation factor related protein 1 (ARFRP1) genes, complete cds
940	13553	26069	5.4	2.0E-04	M86524.1	NT	AU146707 HEMBB1 Homo sapiens cDNA clone HEMBB1001253 3'
940	13553	26070	5.4	2.0E-04	M86524.1	NT	Human dystrophin gene
1221	13821		3.94	2.0E-04	AI286021.1	EST_HUMAN	q198a11.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1855052 3' similar to contains MER3.b2 MER3 repetitive element ;



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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1228	13827		1.95	2.0E-04	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
1872	14458		1.12	2.0E-04	AF224288.1	NT	Mus musculus 5' flanking region of Pib3 gene
2227	14802		0.9	2.0E-04	AA478980.1	EST_HUMAN	zu38b05.s1 Soares ovary tumor NBH0T Homo sapiens cDNA clone IMAGE:740337 3' similar to contains Alu repetitive element
2610	15172	27740	6.83	2.0E-04	U66061.1	NT	Human germline T-cell receptor beta chain TCRBV17S1A1T, TCRBV2S1, TCRBV10S1P, TCRBV28S1P, TCRBV18S1P, TCRBV15S1, TCRBV11S1A1T, HVB relic, TCRBV28S1P, TCRBV34S1, TCRBV14S1, TCRBV3S1, TCRBV4S1A1T, TRY4, TRY5, TRY6, TRY7, TRY8, TORBD1, TCRBJ1S1, TCRBJ1S2.>
3016	15632	28109	1.13	2.0E-04	AI124529.1	EST_HUMAN	am58c09.x1 Johnston frontal cortex Homo sapiens cDNA clone IMAGE:1539780 3'
3377	15986	28464	0.76	2.0E-04	5174736	NT	Homo sapiens tubulin, beta, 4 (TUBB4) mRNA
3483	16089	28561	2.53	2.0E-04	BE082317.1	EST_HUMAN	QV2-BT0638-070500-194-b07 BT0638 Homo sapiens cDNA
3983	16581	29052	0.85	2.0E-04	AW978441.1	EST_HUMAN	EST390550 MAGE resequences, MAGP Homo sapiens cDNA
4224	16812		6.34	2.0E-04	U01029.1	NT	Phascolus vulgaris nitrate reductase (PVNR2) gene, complete cds
4776	17357	29809	1.34	2.0E-04	H66265.1	EST_HUMAN	yu01e11.r1 Soares_pineal_gland_N3HPG Homo sapiens cDNA clone IMAGE:232556 5'
4776	17357	29810	1.34	2.0E-04	H66265.1	EST_HUMAN	yu01e11.r1 Soares_pineal_gland_N3HPG Homo sapiens cDNA clone IMAGE:232556 5'
4913	17488		1.79	2.0E-04	U09226.1	NT	Gallus gallus proteasome 28 kDa subunit homolog mRNA, complete cds
5215	17780	30199	1.44	2.0E-04	AB037997.1	NT	Danio rerio hagaromo gene, exons 1 to 6, partial cds
5733	18359	31065	1.92	2.0E-04	AV654352	EST_HUMAN	AV654352 GLC Homo sapiens cDNA clone GLCDUH10 3'
5745	18371	31076	1.87	2.0E-04	AI690862.1	EST_HUMAN	tpq3b11.x1 NCJ_CGAP_U13 Homo sapiens cDNA clone IMAGE:2207709 3'
5924	18548	31272	0.87	2.0E-04	AA296652.1	EST_HUMAN	EST11191 Uterus Homo sapiens cDNA 5' and similar to EST containing O family repeat
6102	18718	31470	1.06	2.0E-04	4758179	NT	Homo sapiens cell cycle progression 3 protein (DNJ3) mRNA
6385	18889	31769	0.81	2.0E-04	AF140708.1	NT	Mus musculus G protein coupled receptor gene, complete cds; and unknown gene
7281	19809		2.44	2.0E-04	AU121712.1	EST_HUMAN	AU121712 MAMMA1 Homo sapiens cDNA clone MAMMA1000798 5'
7616	20129		13.08	2.0E-04	P08548	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
7626	20138	33017	1.26	2.0E-04	P54296	SWISSPROT	MYOMESIN 2 (M-PROTEIN)(165 KD TITIN-ASSOCIATED PROTEIN)(165 KD CONNECTIN-ASSOCIATED PROTEIN)
7897	20439	33344	2.74	2.0E-04	U32444.2	NT	Solanum lycopersicum phytochrome F (PHYF) gene, partial cds
7897	20439	33345	2.74	2.0E-04	U32444.2	NT	Solanum lycopersicum phytochrome F (PHYF) gene, partial cds
8226	20767	33885	0.97	2.0E-04	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
8226	20767	33886	0.97	2.0E-04	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
8500	21039	33960	1.77	2.0E-04	AF020503.1	NT	Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHLT) gene, exon 5

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8678	21217	34137	0.56	2.0E-04	X57331.1	NT	Human immunoglobulin C(mu) and C(delta) heavy chain genes (constant regions)
9257	21783	34736	0.47	2.0E-04	AA725700.1	EST_HUMAN	ai22a12.s1 Soares_testis_NHT Homo sapiens cDNA clone 1343518 3'
9340	21854	34803	0.5	2.0E-04	P18715	SWISSPROT	GASTRULA ZINC FINGER PROTEIN XLGCF26.1
9885	22382	35357	1.4	2.0E-04	BE146903.1	EST_HUMAN	RC3-HT0254-151099-011-b05 HT0254 Homo sapiens cDNA
9830	22426	35400	2.39	2.0E-04	AA405777.1	EST_HUMAN	zu66c11.1r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:742984 5'
10731	23257	36273	6.22	2.0E-04	AV730373.1	EST_HUMAN	AV730373 HTF Homo sapiens cDNA clone HTFAAA01 5'
11185	23690	36737	5.43	2.0E-04	A1440282.1	EST_HUMAN	ig01f11.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2140269 3' similar to contains Alu repetitive element
11303	23796	36854	2.72	2.0E-04	AW136740.1	EST_HUMAN	UJ-H-B11-adm-c-04-0-U1.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2717190 3'
799	13416	25920	1.41	1.0E-04	H99646.1	EST_HUMAN	yx26c09.s1 Soares_melanocyte 2NBHM Homo sapiens cDNA clone IMAGE:262864 3' similar to contains L1.11 L1 repetitive element
1113	13717	26227	2.57	1.0E-04	P11369	SWISSPROT	RETROVIRUS-RELATED POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ; ENDONUCLEASE]
1153	13756	26265	4.04	1.0E-04	AW013847.1	EST_HUMAN	UJ-H-B10-aab-e-09-0-U1.s1 NCI_CGAP_Sub1 Homo sapiens cDNA clone IMAGE:2708825 3'
1153	13756	26266	4.04	1.0E-04	AW013847.1	EST_HUMAN	UJ-H-B10-aab-e-09-0-U1.s1 NCI_CGAP_Sub1 Homo sapiens cDNA clone IMAGE:2708825 3'
1377	13970		3.95	1.0E-04	U62918.1	NT	Anguilla anguilla dopamine D1A1 receptor (d1A1) gene, complete cds
1669	14262	26795	2.57	1.0E-04	AF148805.1	NT	Kaposi's sarcoma-associated herpesvirus ORF 68 gene, partial cds; and ORF 69, kaposin, v-FLIP, v-cyclin, latent nuclear antigen, ORF K14, v-GPCR, putative phosphoribosylglycinamide synthase, and LAMP (LAMP) genes, complete cds
1669	14262	26796	2.57	1.0E-04	AF148805.1	NT	Kaposi's sarcoma-associated herpesvirus ORF 68 gene, partial cds; and ORF 69, kaposin, v-FLIP, v-cyclin, latent nuclear antigen, ORF K14, v-GPCR, putative phosphoribosylglycinamide synthase, and LAMP (LAMP) genes, complete cds
1901	14486	27047	2.44	1.0E-04	AB048342.1	NT	Equus caballus DNA, chromosome 24q14, microsatellite TKY36
2711	15268	27835	1.09	1.0E-04	BE218833.1	EST_HUMAN	hy45c08.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3176366 3'
2711	15268	27836	1.09	1.0E-04	BE218833.1	EST_HUMAN	hy45c08.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3176366 3'
3323	15933	28410	1.1	1.0E-04	Q62203	SWISSPROT	SPLICEOSOME ASSOCIATED PROTEIN 62 (SAP 62) (SPLICING FACTOR 3A SUBUNIT 2) (SF3A66)
3799	16399	28864	2.7	1.0E-04	A1440282.1	EST_HUMAN	ig01f11.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2140269 3' similar to contains Alu repetitive element
4134	16726	29180	1.72	1.0E-04	M14042.1	NT	Mouse alpha 1 type-IV collagen mRNA
4156	16748	29201	1.27	1.0E-04	AV647727.1	EST_HUMAN	AV647727 GLC Homo sapiens cDNA clone GLC8BD04 3'
5263	17825	30250	0.95	1.0E-04	A357156.1	EST_HUMAN	q62h04.x1 NCI_CGAP_GC4 Homo sapiens cDNA clone IMAGE:2005975 3'
6021	18640	31390	1.5	1.0E-04	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
6568	19166	31952	0.97	1.0E-04	AA177111.1	EST_HUMAN	nc02a12.s1 NCI_CGAP_P33 Homo sapiens cDNA clone IMAGE:252

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6925	19584	32414	0.76	1.0E-04	AA584561.1	EST_HUMAN	ni25a04.s1 NCI_CGAP_AA1 Homo sapiens cDNA clone IMAGE:993486 3' similar to gb:M97252
7237	19767	32623	14.09	1.0E-04	A1251980.1	EST_HUMAN	KALLMANN SYNDROME PROTEIN PRECURSOR (HUMAN); contains Alu repetitive element;
7572	19767	32623	14.23	1.0E-04	A1251980.1	EST_HUMAN	qv57d10.x1 NCI_CGAP_Ov32 Homo sapiens cDNA clone IMAGE:1985683 3'
7837	20479	33389	1.02	1.0E-04	A1630453.1	EST_HUMAN	qv57d10.x1 NCI_CGAP_Ov32 Homo sapiens cDNA clone IMAGE:1985683 3'
9260	21766	34738	2.34	1.0E-04	A1606220.1	EST_HUMAN	ab94g08.s1 Strategene lung (#937210) Homo sapiens cDNA clone IMAGE:854654 3'
9270	21798	34745	1.71	1.0E-04	Q88989	SWISSPROT	wf26e08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2356742 3'
9346	21860		0.78	1.0E-04	T77153.1	EST_HUMAN	CYSTATIN-RELATED EPIDIDYMAL SPERMATOGENIC PROTEIN PRECURSOR (CYSTATIN 8)
9364	22084	35023	2.2	1.0E-04	10863876	NT	y472c08.r1 Soares fetal liver spleen 1NfLS Homo sapiens cDNA clone IMAGE:113774 5'
10081	22576		2.87	1.0E-04	P08547	SWISSPROT	Homo sapiens phospholipid scramblase 1 (PLSCR1), mRNA
10118	22811	35601	0.83	1.0E-04	P08548	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
11218	23721		2.06	1.0E-04	M28587.1	NT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
11503	23952	37020	1.98	1.0E-04	A8032968.1	NT	Mouse alpha leukocyte interferon gene, complete cds
11540	23988	37059	2.1	1.0E-04	AW269061.1	EST_HUMAN	Homo sapiens mRNA for KIAA1142 protein, partial cds
11570	24017	37086	1.87	1.0E-04	Q03696	SWISSPROT	kv49g12.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2816518 3'
11570	24017	37087	1.87	1.0E-04	Q03696	SWISSPROT	NEURONAL-GLIAL CELL ADHESION MOLECULE PRECURSOR (NG-CAM)
11670	24092		1.57	1.0E-04	BE698769.1	EST_HUMAN	NEURONAL-GLIAL CELL ADHESION MOLECULE PRECURSOR (NG-CAM)
11918	24878		1.99	1.0E-04	BE676399.1	EST_HUMAN	CM0-CT0404-130700-475-H03 CT0404 Homo sapiens cDNA
727	13347	25839	1.98	9.0E-05	AA718933.1	EST_HUMAN	7i28a10.x1 NCI_CGAP_OCL1 Homo sapiens cDNA clone IMAGE:3286058 3' similar to contains L1.13 L1
2047	14629	27198	0.92	9.0E-05	AW866218.1	EST_HUMAN	repetitive element;
6117	18733	31488	1.45	9.0E-05	Q60716	SWISSPROT	elr45c11.s1 Soares_testis_NHT Homo sapiens cDNA clone 1292488 3'
9397	21820		2.71	9.0E-05	D85606.1	NT	QV4-SN0023-070400-166-b04 SN0023 Homo sapiens cDNA
9399	21822	34771	2.79	9.0E-05	AF120982.1	NT	PROLYL 4-HYDROXYLASE ALPHA-2 SUBUNIT PRECURSOR
11017	23531	36567	2.86	9.0E-05	AW073078.1	EST_HUMAN	Homo sapiens gene for cholecystokinin type-A receptor, complete cds
11121	23629	36671	1.99	9.0E-05	A1287878.1	EST_HUMAN	Homo sapiens methyl-CpG binding protein 1 (MBD1) gene, exon 15b
11483	18733	31488	3.89	9.0E-05	Q60716	SWISSPROT	xa34g05.x1 NCI_CGAP_Br18 Homo sapiens cDNA clone IMAGE:2568728 3' similar to contains L1.12 L1
							repetitive element;
							qv23f08.x1 NCI_CGAP_Lym6 Homo sapiens cDNA clone IMAGE:1982435 3' similar to contains element
							MIR repetitive element;
							PROLYL 4-HYDROXYLASE ALPHA-2 SUBUNIT PRECURSOR
11974	24939		4.26	9.0E-05	AF129756.1	NT	Homo sapiens MSH55 gene, partial cds; and CLIC1, DDAH, G6b, G6c, G5b, G6d, G6e, G6f, BAT5, G5b,
854	13470	25981	1.21	8.0E-05	AJ251646.1	NT	CSK2B, BAT4, G4, Apo M, BAT3, BAT2, AIF-1, 1C7, LST-1, LTB, TNF, and LTA genes, complete cds
897	13511		9.89	8.0E-05	AJ251646.1	NT	Pisum sativum mRNA for beta-1,3 glucanase (gns2 gene)
							Pisum sativum mRNA for beta-1,3 glucanase (gns2 gene)

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2977	15593		0.71	8.0E-05	M83575.1	NT	Human platelet-derived growth factor A chain (PDGFA) gene, exons only
4579	17162	29604	1.87	8.0E-05	AW044605.1	EST_HUMAN	wy78a04.x1 Soares NSF_F8_9W_OT_PA_S1 Homo sapiens cDNA clone IMAGE:2554638 3'
8683	21222	34142	0.49	8.0E-05	Y11686.1	NT	Mus musculus gene for hexokinase II, exon 1 (and joined CDS)
11030	23544	36581	2.32	8.0E-05	M69197.1	NT	Human haptoglobin and haptoglobin-related protein (HP and HPR) genes, complete cds
12613	24921		2.72	8.0E-05	AA279333.1	EST_HUMAN	zs88h01.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:704593 3' similar to contains Alu repetitive element; contains element MSR1 repetitive element;
369	13018	25501	8.81	7.0E-05	AW847445.1	EST_HUMAN	RC3-CT0208-220999-011-E04 CT0208 Homo sapiens cDNA
369	13018	25502	8.81	7.0E-05	AW847445.1	EST_HUMAN	RC3-CT0208-220999-011-E04 CT0208 Homo sapiens cDNA
593	13223	25697	3.82	7.0E-05	L49075.1	EST_HUMAN	HUM072014F Human foetus cDNA Homo sapiens cDNA clone EST HFD072014
593	13223	25698	3.82	7.0E-05	L49075.1	EST_HUMAN	HUM072014F Human foetus cDNA Homo sapiens cDNA clone EST HFD072014
1093	13698	26208	1.41	7.0E-05	Q22949	SWISSPROT	PROBABLE GLYCEROL-3-PHOSPHATE ACYL TRANSFERASE, MITOCHONDRIAL PRECURSOR (GPAT)
2744	15299	27865	3.67	7.0E-05	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
3194	15806	28279	4.69	7.0E-05	AB009080.1	NT	Dictyostellum discoideum gene for TRFA, complete cds
4482	17048	28492	1.73	7.0E-05	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
4543	17127	29570	0.58	7.0E-05	U60980.1	NT	Caenorhabditis elegans Skp1p homolog mRNA, complete cds
8167	20708	33624	1.11	7.0E-05	AA505582.1	EST_HUMAN	nh93g01.s1 NCI_CGAP_Br2 Homo sapiens cDNA clone IMAGE:966096 3'
9472	21871	34820	3.74	7.0E-05	T07095.1	EST_HUMAN	EST04084 Fetal brain, Stratagene (cat#936206) Homo sapiens cDNA clone HFBED60
11040	23554		7.95	7.0E-05	10835046	NT	Homo sapiens sarcoglycan, epsilon (SGCE), mRNA
2073	14653	27225	2.03	6.0E-05	4885170	NT	Homo sapiens chromosome X open reading frame 6 (CXORF6) mRNA
2073	14653	27226	2.03	6.0E-05	4885170	NT	Homo sapiens chromosome X open reading frame 6 (CXORF6) mRNA
2624	15186	27753	1.34	6.0E-05	A1655241.1	EST_HUMAN	w654h06.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2309531 3' similar to gb:J03250 DNA TOPOISOMERASE I (HUMAN);
2709	15266	27833	0.9	6.0E-05	Z84506.1	NT	H. sapiens flow-sorted chromosome 6 HindIII fragment, SC6pA28B10
2709	15266	27834	0.9	6.0E-05	Z84506.1	NT	H. sapiens flow-sorted chromosome 6 HindIII fragment, SC6pA28B10
2840	13329	25815	2.88	6.0E-05	AF053630.1	NT	Homo sapiens monocyte/neutrophil elastase inhibitor gene, complete cds
5352	17912	30327	1.3	6.0E-05	AW962309.1	EST_HUMAN	EST374382 IMAGE resequences, MAGG Homo sapiens cDNA
6071	18688	31432	3.12	6.0E-05	Q12860	SWISSPROT	CONTACTIN PRECURSOR (GLYCOPROTEIN GP135)
6071	18688	31433	3.12	6.0E-05	Q12860	SWISSPROT	CONTACTIN PRECURSOR (GLYCOPROTEIN GP135)
6535	19135	31928	1.45	6.0E-05	N72829.1	EST_HUMAN	yw50g11.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:246212 5'
7013	19511	32332	0.79	6.0E-05	AA897680.1	EST_HUMAN	q80a03.s1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1504588 3'
8029	20571	33475	0.97	6.0E-05	BE064410.1	EST_HUMAN	RC4-BT0311-141199-011-h06 BT0311 Homo sapiens cDNA
8029	20571	33476	0.97	6.0E-05	BE064410.1	EST_HUMAN	RC4-BT0311-141199-011-h06 BT0311 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8381	20921	33841	0.65	6.0E-05	AA150482.1	EST_HUMAN	z08c08.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:491726 3' similar to contains element MER28 repetitive element ;
8385	20925	33845	2.3	6.0E-05	AW896629.1	EST_HUMAN	PM4-NN0050-310300-001-110 NN0050 Homo sapiens cDNA
8516	21055	33978	0.62	6.0E-05	Q60401	SWISSPROT	COMPLEMENT DEACY-ACCELERATING FACTOR PRECURSOR
9176	21753	34699	1.09	6.0E-05	P08607	SWISSPROT	C4B-BINDING PROTEIN PRECURSOR (C4BP)
9176	21753	34700	1.09	6.0E-05	P08607	SWISSPROT	C4B-BINDING PROTEIN PRECURSOR (C4BP)
9440	21966	34915	1.13	6.0E-05	T94149.1	EST_HUMAN	ye28c12.1r1 Stratiogene lung (#937210) Homo sapiens cDNA clone IMAGE:119082 5'
9637	22137	35103	0.57	6.0E-05	AW627985.1	EST_HUMAN	h137a03.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2874444 3'
10827	23159	36172	3.96	6.0E-05	R75639.1	EST_HUMAN	yf56d08.s1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:143535 3' similar to contains Alu repetitive element; contains LTR7 repetitive element ;
11394	23846	36911	4.18	6.0E-05	AA044015.1	EST_HUMAN	z5802.1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:487035 5'
12193	24919	30716	10.26	6.0E-05	AW890110.1	EST_HUMAN	MRO-NT0038-250400-001-109 NT0038 Homo sapiens cDNA
1449	14041	26569	18.37	5.0E-05	AW392086.1	EST_HUMAN	QV4-ST0234-241199-040-111 ST0234 Homo sapiens cDNA
1903	14488		1.75	5.0E-05	8923881	NT	Homo sapiens 22kDa peroxisomal membrane protein-like (LOC55895), mRNA
4051	16948	29116	3.86	5.0E-05	AJ251894.1	NT	Homo sapiens partial SLC22A3 gene for extraneuronal monoamine transporter (EMT), exon 1
5716	18342	30848	11.26	5.0E-05	X38855.1	NT	Human ML C1emb gene for embryonic myosin alkaline light chain, 3'UTR
6144	18758	31516	2.97	5.0E-05	AV653544.1	EST_HUMAN	AV653544 GLC Homo sapiens cDNA clone GLCMA08 3'
6316	18923	31700	0.97	5.0E-05	AF260225.1	NT	Homo sapiens TESTIN 2 and TESTIN 3 genes, complete cds, alternatively spliced
7370	18996		1.22	5.0E-05	AB037964.1	NT	Mus musculus gene for calretinin, exon 1
11971	24460		5.73	5.0E-05	P49193	SWISSPROT	RETINAL-BINDING PROTEIN (RALBP)
12249	24460		9.18	5.0E-05	P49193	SWISSPROT	RETINAL-BINDING PROTEIN (RALBP)
2833	12906		3.49	4.0E-05	U12821.1	NT	Human renin (REN) gene, 5' flanking region
4580	17163	29605	1.37	4.0E-05	P49193	SWISSPROT	RETINAL-BINDING PROTEIN (RALBP)
4580	17163	29606	1.37	4.0E-05	P49193	SWISSPROT	RETINAL-BINDING PROTEIN (RALBP)
5166	17735	30162	0.58	4.0E-05	AF212313.1	NT	Drosophila melanogaster senseless protein (sens) gene, complete cds
7020	19518	32340	0.75	4.0E-05	U01947.1	NT	Macaca mulatta haptoglobin (HP) gene, 5' region
9442	21968		7.26	4.0E-05	AF202635.1	NT	Homo sapiens PP1200 mRNA, complete cds
9812	22408	35384	0.55	4.0E-05	P11369	SWISSPROT	RETROVIRUS-RELATED POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ; ENDONUCLEASE]
10305	22789	35790	0.73	4.0E-05	P23780	SWISSPROT	BETA-GALACTOSIDASE PRECURSOR (LACTASE) (ACID BETA-GALACTOSIDASE)
10648	23180	36193	5.05	4.0E-05	AW627946.1	EST_HUMAN	h136c07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2874380 3' similar to contains element MIR repetitive element ;
11850	24210	31041	3.27	4.0E-05	AL163252.2	NT	Homo sapiens chromosome 21 segment HS21C052
11929	24264		1.38	4.0E-05	AW117580.1	EST_HUMAN	xa93a09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2605192 3'

Table 4

## Single Exon Probes Expressed In Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
709	13330	25817	0.84	3.0E-05	A1248081.1	EST_HUMAN	q164c10.x1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:1849458 3' similar to contains Alu repetitive element; contains element KER repetitive element ;
1097	13702	26212	1.49	3.0E-05	AW273851.1	EST_HUMAN	xx24p03.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2814100 3'
1170	13772	26280	1.51	3.0E-05	BF037898.1	EST_HUMAN	601461463F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3865142 5'
1170	13772	26281	1.51	3.0E-05	BF037898.1	EST_HUMAN	601461463F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3865142 5'
2746	15301	27867	1.17	3.0E-05	Q62234	SWISSPROT	SKELEMIN
3331	15941		0.69	3.0E-05	A1288918.1	EST_HUMAN	q191g11.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1879748 3' similar to TR:O08632
4471	17057	29503	7.22	3.0E-05	BE169211.1	EST_HUMAN	O08632 GLYCINE TYROSINE-RICH HAIR PROTEIN ;
4471	17057	29504	7.22	3.0E-05	BE169211.1	EST_HUMAN	PM1-HT0521-120200-001-e10 HT0521 Homo sapiens cDNA
4565	17148	29594	1.06	3.0E-05	AA368879.1	EST_HUMAN	PM1-HT0521-120200-001-e10 HT0521 Homo sapiens cDNA
4565	17148	29595	1.06	3.0E-05	AA368879.1	EST_HUMAN	EST79996 Placenta I Homo sapiens cDNA similar to similar to p53-associated protein
4692	17274		0.71	3.0E-05	AL163302.2	NT	EST79996 Placenta I Homo sapiens cDNA similar to similar to p53-associated protein
4726	17307	29751	0.75	3.0E-05	AF149773.1	NT	Homo sapiens chromosome 21 segment HS21C102
4963	13330	25817	0.65	3.0E-05	A1248081.1	EST_HUMAN	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
5746	18372	31080	1.73	3.0E-05	11072102	NT	q164c10.x1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:1849458 3' similar to contains Alu repetitive element; contains element KER repetitive element ;
6854	19442	32257	1.28	3.0E-05	AJ225782.1	NT	Mus musculus myosin light chain 2, precursor lymphocyte-specific (Mylc2pl), mRNA
6854	19442	32258	1.28	3.0E-05	AJ225782.1	NT	Homo sapiens SYBL1 gene, exons 6-8
7839	20381	33286	1.9	3.0E-05	BE1733157.1	EST_HUMAN	Homo sapiens SYBL1 gene, exons 6-8
8293	20834	33756	1.29	3.0E-05	AA284049.1	EST_HUMAN	601567451F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3842292 5'
8824	21363	34288	1.78	3.0E-05	AW770982.1	EST_HUMAN	zs60b05.s1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:701841 3'
8828	21367	34291	1.22	3.0E-05	6912431	NT	h194e08.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3009638 3'
8832	21371	34296	0.47	3.0E-05	P43361	SWISSPROT	Homo sapiens Interleukin-1 receptor antagonist homolog 1 (IL1HY1), mRNA
9058	21595		0.88	3.0E-05	X03273.1	NT	MELANOMA-ASSOCIATED ANTIGEN 8 (MAGE-8 ANTIGEN)
9244	21770	34718	1.3	3.0E-05	AA372562.1	EST_HUMAN	Human Alu-family cluster 5' of alpha(1)-acid glycoprotein gene
9581	22081		2.97	3.0E-05	A1769331.1	EST_HUMAN	EST84475 Colon adenocarcinoma IV Homo sapiens cDNA 5' end
10428	22922	35925	0.85	3.0E-05	Q62918	SWISSPROT	wg36f09.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2367209 3'
10428	22922	35926	0.85	3.0E-05	Q62918	SWISSPROT	PROTEIN KINASE C-BINDING PROTEIN NELL2 PRECURSOR (NEL-LIKE PROTEIN 2)
12055	24338		1.48	3.0E-05	AJ271735.1	NT	PROTEIN KINASE C-BINDING PROTEIN NELL2 PRECURSOR (NEL-LIKE PROTEIN 2)
12387	25101		1.52	3.0E-05	AW518689.1	EST_HUMAN	Homo sapiens Xq pseudautosomal region; segment 1/2
2362	14933	27506	1.55	2.0E-05	A1286021.1	EST_HUMAN	xs89406.x1 NCI_CGAP_U12 Homo sapiens cDNA clone IMAGE:2776811 3'
2619	15181	27747	10.26	2.0E-05	M13792.1	NT	q198e11.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1855052 3' similar to contains MER3.62 MER3 repetitive element ;
							Human adenosine deaminase (ADA) gene, complete cds

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2738	15293		6.76	2.0E-05	AA160582.1	EST_HUMAN	zq46a12.1 Stratagene hNT neuron (#837233) Homo sapiens cDNA clone IMAGE:632734 5' similar to contains Alu repetitive element; contains element L1 repetitive element
3171	15785	28257	1.59	2.0E-05	BE066036.1	EST_HUMAN	RC3-BT0319-120200-014-H08 BT0319 Homo sapiens cDNA
3391	15999	28477	0.63	2.0E-05	AF184614.1	NT	Homo sapiens p47-phox (NCF1) gene, complete cds
3416	16024	28506	1.04	2.0E-05	X89211.1	NT	H. sapiens DNA for endogenous retroviral like element
3541	16146		0.72	2.0E-05	X95465.1	NT	S. cerevisiae 12.8 Kbp fragment of the left arm of chromosome XV
3680	16478		0.67	2.0E-05	AL039107.1	EST_HUMAN	DKFZp5661084.1 1 568 (synonym: hfkd2) Homo sapiens cDNA clone DKFZp5661084 5'
5010	17583	30026	0.63	2.0E-05	AJ131016.1	NT	Homo sapiens SOL gene locus
5178	17743		2.42	2.0E-05	L77569.1	NT	Homo sapiens DiGeorge syndrome critical region, telomeric end
5933	18555	31282	1.84	2.0E-05	AJ011712.1	NT	Homo sapiens TNNT1 gene, exons 1-11 (and joined CDS)
6125	18740	31492	1.4	2.0E-05	Q13183	SWISSPROT	RENAL SODIUM/DICARBOXYLATE COTRANSPORTER (NA(+)/DICARBOXYLATE COTRANSPORTER)
6125	18740	31493	1.4	2.0E-05	Q13183	SWISSPROT	RENAL SODIUM/DICARBOXYLATE COTRANSPORTER (NA(+)/DICARBOXYLATE COTRANSPORTER)
6305	18912	31686	0.73	2.0E-05	A1149272.1	EST_HUMAN	qc72a02.x1 Soares_placenta_8t06weeks_2NbhHP8t09W Homo sapiens cDNA clone IMAGE:1715114 3' similar to contains L1.13 L1 repetitive element
6736	19330	32136	2.12	2.0E-05	AA714330.1	EST_HUMAN	rw06d12.s1 NCL_CGAP_SS1 Homo sapiens cDNA clone IMAGE:1238519 3'
6982	19480	32301	2.2	2.0E-05	Y08926.1	NT	P. falciparum mRNA for AARP1 protein, partial
6994	19492	32313	1.34	2.0E-05	A1492960.1	EST_HUMAN	qz47b06.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2030003 3' similar to TR:002711
7002	19500		8.08	2.0E-05	A1981025.1	EST_HUMAN	O02711 PRO-POL-DUTPASE POLYPROTEIN; wu35h07.x1 Soares_Dieckgraefe_colon_NHCD Homo sapiens cDNA clone IMAGE:2522077.3'
7207	19738	32591	2.2	2.0E-05	AF224262.1	NT	Heterodontus francisci HoxA10 (HoxA10), HoxA9 (HoxA9), HoxA7 (HoxA7), HoxA6 (HoxA6), HoxA5 (HoxA5), HoxA4 (HoxA4), HoxA3 (HoxA3), HoxA2 (HoxA2), and HoxA1 (HoxA1) genes, complete cds
7207	19738	32592	2.2	2.0E-05	AF224262.1	NT	Heterodontus francisci HoxA10 (HoxA10), HoxA9 (HoxA9), HoxA7 (HoxA7), HoxA6 (HoxA6), HoxA5 (HoxA5), HoxA4 (HoxA4), HoxA3 (HoxA3), HoxA2 (HoxA2), and HoxA1 (HoxA1) genes, complete cds
7403	19928		0.91	2.0E-05	AF128847.1	NT	Homo sapiens indolethylamine N-methyltransferase (INMT) mRNA, INMT-2 allele, complete cds
7626	20368	33276	1.41	2.0E-05	A1981040.1	EST_HUMAN	tg20h05.x1 NCL_CGAP_CLL1 Homo sapiens cDNA clone IMAGE:2109369 3'
9191	21708	34651	0.49	2.0E-05	P49457	SWISSPROT	COMPLEMENT DECAY-ACCELERATING FACTOR (CD55)
9191	21708	34652	0.49	2.0E-05	P49457	SWISSPROT	COMPLEMENT DECAY-ACCELERATING FACTOR (CD55)
9837	22335	35317	0.48	2.0E-05	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
10041	22536	35532	0.74	2.0E-05	BF055939.1	EST_HUMAN	7175g09.y1 NCL_CGAP_Bm20 Homo sapiens cDNA clone IMAGE:3340576 5'

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10482	22976	35984	2.62	2.0E-05	N41751.1	EST_HUMAN	yw91a06.r1 Soares_placenta_8tc9weeks_2NbHP8a9W Homo sapiens cDNA clone IMAGE:259570 5'
10482	22976	35985	2.62	2.0E-05	N41751.1	EST_HUMAN	yw91a06.r1 Soares_placenta_8tc9weeks_2NbHP8a9W Homo sapiens cDNA clone IMAGE:259570 5'
10524	19500		2.44	2.0E-05	A1991025.1	EST_HUMAN	wu35h07.x1 Soares_Dieckgraebe_colon_NHCD Homo sapiens cDNA clone IMAGE:2522077 3'
11327	23025	36034	2.74	2.0E-05	BE175801.1	EST_HUMAN	RC5-HT0582-280300-012-E12 HT0582 Homo sapiens cDNA
11983	24844		4.91	2.0E-05	BE348229.1	EST_HUMAN	hw21a03.x1 NCI_CGAP_Kid111 Homo sapiens cDNA clone IMAGE:3183532 3' similar to TR:Q12832
12090	25018		13.02	2.0E-05	AW074604.1	EST_HUMAN	xa86a03.x1 NCI_CGAP_Cot17 Homo sapiens cDNA clone IMAGE:2573932 3' similar to contains L1.B3 L1 repetitive element
12144	24831		2.54	2.0E-05	AF275948.1	NT	Homo sapiens ABCA1 (ABCA1) gene, complete cds
12655	24727		2.35	2.0E-05	A1200870.1	EST_HUMAN	qf68g.11.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1755236 3'
2719	15475	27841	1.45	1.0E-05	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21C082
3711	16312	28780	1.91	1.0E-05	AF088273.1	NT	Drosophila melanogaster strain Lanto 120 Suppressor of Hairless (Su(H)) gene, partial cds
4039	16837	29105	11.9	1.0E-05	P81274	SWISSPROT	MOSAIC PROTEIN LGN
4252	16840	29289	0.98	1.0E-05	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
4364	16951	29391	1.89	1.0E-05	AA431119.1	EST_HUMAN	zw69g04.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:781494 5'
4976	17550	29992	2.24	1.0E-05	AW419134.1	EST_HUMAN	xy49g11.x1 NCI_CGAP_Lu34.1 Homo sapiens cDNA clone IMAGE:2856548 3'
5395	17953		0.94	1.0E-05	A1733566.1	EST_HUMAN	os64d07.x5 NCI_CGAP_Br2 Homo sapiens cDNA clone IMAGE:1610125 3' similar to contains Alu repetitive element
5426	17983	30389	0.91	1.0E-05	L27595.1	NT	Mus muscaris bradykinin B2 receptor (B2R) gene, complete cds
6848	19438	32252	1.32	1.0E-05	AJ246003.1	NT	Homo sapiens Spast gene for spastin protein
7140	19520	32342	3.98	1.0E-05	AA641846.1	EST_HUMAN	ns19g02.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1184114 3' similar to contains L1.L1 L1 L1 repetitive element
7142	19875	32515	14.32	1.0E-05	4505844	NT	Homo sapiens phospholipase A2, group X (PLA2G10) mRNA, and translated products
7655	20167	33054	0.76	1.0E-05	BF222846.1	EST_HUMAN	7p57d01.x1 NCI_CGAP_Pr28 Homo sapiens cDNA clone IMAGE:3649945 3' similar to contains MER10.B3
7754	20262		2.22	1.0E-05	P19474	SWISSPROT	MER10 repetitive element
8846	21385		2.56	1.0E-05	AL163227.2	NT	52 KD RO PROTEIN (SIOGREN SYNDROME TYPE A ANTIGEN (SS-A)) (RO(SS-A))
8960	21528	34457	2.18	1.0E-05	AA452578.1	EST_HUMAN	z35h12.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:788519 3' similar to gb:U02932 PEROXISOME PROLIFERATOR ACTIVATED RECEPTOR ALPHA (HUMAN);
9211	21728	34671	13.74	1.0E-05	AA236110.1	EST_HUMAN	zs05e11.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:684332 5' similar to contains Alu repetitive element; contains element TAR1 repetitive element
9288	21898	34834	0.6	1.0E-05	AV732190.1	EST_HUMAN	AV732190 HTF Homo sapiens cDNA clone HTFBIH01 5'



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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9752	22250	35232	0.76	1.0E-05	AW510902.1	EST_HUMAN	hd41b02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2812043 3' similar to contains OFR.11 OFR repetitive element ;
9752	22250	35233	0.76	1.0E-05	AW510902.1	EST_HUMAN	hd41b02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2812043 3' similar to contains OFR.11 OFR repetitive element ;
9830	22328	35309	1.58	1.0E-05	AW291521.1	EST_HUMAN	UI-HB12-aggk-a-08-Q-UI.s1 NCL_CGAP_Sub4 Homo sapiens cDNA clone IMAGE:2724398 3'
9830	22328	35310	1.58	1.0E-05	AW291521.1	EST_HUMAN	UI-HB12-aggk-a-08-Q-UI.s1 NCL_CGAP_Sub4 Homo sapiens cDNA clone IMAGE:2724398 3'
10087	22582		1.73	1.0E-05	AW466995.1	EST_HUMAN	hd07c10.x1 NCL_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2873010 3' similar to contains L1.12 L1 repetitive element ;
10789	23322	36332	2.32	1.0E-05	U91328.1	NT	Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (HLA-H) gene, RoRet gene, and sodium phosphate transporter (NPT3) gene, complete cds
10789	23322	36333	2.32	1.0E-05	U91328.1	NT	Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (HLA-H) gene, RoRet gene, and sodium phosphate transporter (NPT3) gene, complete cds
12493	25011	30816	1.87	1.0E-05	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
2696	15253	27824	4.74	9.0E-08	AI563811.1	EST_HUMAN	tt73a06.x1 NCL_CGAP_HSC3 Homo sapiens cDNA clone IMAGE:2246386 3'
3130	15744	28213	5.23	9.0E-08	AI218983.1	EST_HUMAN	qg11b08.x1 Soares_placenta_8to9weeks_2NbHP8to9W Homo sapiens cDNA clone IMAGE:1759191 3'
3870	18271		3.37	9.0E-08	M61755.1	NT	Human alanine:glyoxylate aminotransferase (AGXT) gene, exons 1 and 2
6064	18881	31423	2.25	9.0E-08	L23416.1	NT	Homo sapiens differentiation antigen CD20 gene, exons 5, 6
6947	19524	32348	0.84	9.0E-08	BE085042.1	EST_HUMAN	RC1-BT0313-110500-017-a07 BT0313 Homo sapiens cDNA
7468	18988	32853	0.85	9.0E-08	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
7751	20259	33156	12.47	9.0E-08	AI034370.1	EST_HUMAN	α20g01.x1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1856812 3' similar to contains Alu repetitive element;
8400	20940	33963	1.18	9.0E-08	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
8913	21451	34372	2.48	9.0E-08	Q63769	SWISSPROT	SUSHI REPEAT-CONTAINING PROTEIN SRPX PRECURSOR (DRS PROTEIN) (DOWN-REGULATED BY V-SRC)
8913	21451	34373	2.48	9.0E-08	Q63769	SWISSPROT	SUSHI REPEAT-CONTAINING PROTEIN SRPX PRECURSOR (DRS PROTEIN) (DOWN-REGULATED BY V-SRC)
9149	21684	34628	4.9	9.0E-08	U35114.1	NT	Human apolipoprotein E (APOE) gene, hepatic control region HCR-2
10818	23339	36353	3.76	9.0E-08	Q10384	SWISSPROT	PUTATIVE SERINE/THREONINE-PROTEIN KINASE C22E12.14C
2569	15469	27701	1.48	8.0E-08	AW362539.1	EST_HUMAN	RC3-CT0283-201199-011-h11 CT0283 Homo sapiens cDNA
10424	22918	35919	0.84	8.0E-08	P34083	SWISSPROT	FASIGLII II, PHOSPHATIDYLINOSITOL-LINKED ISOFORM PRECURSOR (FAS II)
10424	22918	35920	0.84	8.0E-08	P34083	SWISSPROT	FASIGLII II, PHOSPHATIDYLINOSITOL-LINKED ISOFORM PRECURSOR (FAS II)

Table 4

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1015	13625		1.71	7.0E-06	AA689729.1	EST_HUMAN	ab90f10.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:854251 3' similar to contains
1487	14080	26619	3.36	7.0E-06	7662177	NT	MER20.11 MER20 repetitive element ; Homo sapiens KIAA0355 gene product (KIAA0355), mRNA
2177	14754	27324	1.55	7.0E-06	AW593215.1	EST_HUMAN	hg11b12.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2945279 3' similar to gb:X62048_cds1 WEE1-LIKE PROTEIN KINASE (HUMAN); qwr16g09.x1 NCI_CGAP_U13 Homo sapiens cDNA clone IMAGE:1991296 3' similar to contains Alu repetitive element;
2897	15514		7.94	7.0E-06	A1368252.1	EST_HUMAN	
3620	16223		1	7.0E-06	AA385542.1	EST_HUMAN	EST89205 Thyroid Homo sapiens cDNA 5' end similar to EST containing L1 repeat
5874	18496		5.81	7.0E-06	AW883141.1	EST_HUMAN	QV2-OT0062:250400-173-h01 OT0062 Homo sapiens cDNA
5972	18593	31327	0.94	7.0E-06	N98645.1	EST_HUMAN	Y65c07.r1 Soares_multiple_sclerosis_2NbhMSP Homo sapiens cDNA clone IMAGE:278412 5'
8724	21263	34183	0.72	7.0E-06	11420709	NT	Homo sapiens DNA segment, numerous copies, expressed probes (GS1 gene) (DXF68S1E), mRNA
9814	22312		2.32	7.0E-06	Q61147	SWISSPROT	CERULOPLASMIN PRECURSOR (FERROXIDASE)
11710	25043	30506	1.62	7.0E-06	BF215972.1	EST_HUMAN	601881522F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4083972 5'
2942	15558	28032	1.29	6.0E-06	BE098189.1	EST_HUMAN	QV3-B10379-010300-105-d11 BT0379 Homo sapiens cDNA
4965	15584	28065	2.03	6.0E-06	Q01456	SWISSPROT	OVARIAN ABUNDANT MESSAGE PROTEIN (OAM PROTEIN)
4875	17450	28901	1.47	6.0E-06	A1040099.1	EST_HUMAN	aa08602.x1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1655738 3' similar to contains MER8.12 MER8 repetitive element ;
5552	18184	30599	1.3	6.0E-06	AF167441.1	NT	Mus musculus E-cadherin binding protein E7 mRNA, complete cds
5605	18234	30685	1.15	6.0E-06	Q02040	SWISSPROT	PROTEIN XE7
9770	22268		1.67	6.0E-06	AW801912.1	EST_HUMAN	IL5-UM0070-110400-063-g02 UM0070 Homo sapiens cDNA
12602	24688	30881	1.47	6.0E-06	11418157	NT	Homo sapiens calcium channel, voltage-dependent, alpha 11 subunit (CACNA11), mRNA
5361	17921	30335	1.02	5.0E-06	AL163288.2	NT	Homo sapiens chromosome 21 segment HS21C088
6211	18821	31592	3.73	5.0E-06	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
6479	19080	31863	2.04	5.0E-06	U07561.1	NT	Human ABL gene, exon 1b and intron 1b, and putative M8604 Met protein (M8604 Met) gene, complete cds
7284	19812	32668	1.11	5.0E-06	AB007546.1	NT	Homo sapiens gene for LECT2, complete cds
10013	22508	35499	6.57	5.0E-06	AA313620.1	EST_HUMAN	EST185496 Colon carcinoma (HCC) cell line Homo sapiens cDNA 5' end
10406	22900	35895	0.54	5.0E-06	P06681	SWISSPROT	COMPLEMENT C2 PRECURSOR (C3/C5 CONVERTASE)
12482	24615	30890	13.8	5.0E-06	A1065045.1	EST_HUMAN	HA0877 Human fetal liver cDNA library Homo sapiens cDNA
675	13289	25780	6.05	4.0E-06	R16267.1	EST_HUMAN	ye49c03.r1 Soares_infant_brain_1NIB Homo sapiens cDNA clone IMAGE:53254 5' similar to contains Alu repetitive element; contains L1 repetitive element ;
879	13493	26011	6.94	4.0E-06	AW103354.1	EST_HUMAN	xc69g12.x1 NCI_CGAP_Eso2 Homo sapiens cDNA clone IMAGE:2589574 3' similar to contains Alu repetitive element; contains element MER21 repetitive element ;

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1378	13972	26499	3.92	4.0E-06	AI334928.1	EST_HUMAN	ib33e09.x1 NCI_CGAP_HSC2 Homo sapiens cDNA clone IMAGE:2056168 3'
1379	13972	26500	3.92	4.0E-06	AI334928.1	EST_HUMAN	ib33e09.x1 NCI_CGAP_HSC2 Homo sapiens cDNA clone IMAGE:2056168 3'
1322	14114	26651	3.17	4.0E-06	BF365612.1	EST_HUMAN	QV2-NT0046-200600-250-h07 NT0046 Homo sapiens cDNA
2305	14878	27454	1.68	4.0E-06	AW015401.1	EST_HUMAN	U1-H-BD-aet-f05-0-U1.s1 NCI_CGAP_Sub1 Homo sapiens cDNA clone IMAGE:2710425 3'
3099	15714	28186	1.26	4.0E-06	AF198349.1	NT	Gallus gallus Dach2 protein (Dach2) mRNA, complete cds
3963	16561	28030	1.35	4.0E-06	AW848285.1	EST_HUMAN	IL3-CT0214-150200-074-B03 CT0214 Homo sapiens cDNA
4930	17505	28951	1.86	4.0E-06	AI886939.1	EST_HUMAN	w94c10.x1 NCI_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2432562 3' similar to contains element
5053	17626	30070	2.12	4.0E-06	AL163279.2	NT	MER22 repetitive element;
8438	20978	33890	0.53	4.0E-06	OT15393	SWISSPROT	Homo sapiens chromosome 21 segment HS21C079
8735	21274	34195	2.66	4.0E-06	AF009660.1	NT	TRANSMEMBRANE PROTEASE, SERINE 2
9624	22124	35088	1.11	4.0E-06	AJ272265.1	NT	Homo sapiens T cell receptor beta locus, TCRBV7S3A2 to TCRBV12S2 region
11324	23022	36031	3.84	4.0E-06	AB007955.1	NT	Homo sapiens SPP2 gene for secreted phosphoprotein 24 precursor, exons 1-8
2208	14784	27357	1.31	3.0E-06	AA700592.1	EST_HUMAN	Homo sapiens mRNA, chromosome 1 specific transcript KIAA0486
2208	14784	27358	1.31	3.0E-06	AA700592.1	EST_HUMAN	z134b08.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:432663 3' similar to contains L1.t1 L1 repetitive element;
2307	14879		1.54	3.0E-06	AF202695.1	NT	z134b08.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:432663 3' similar to contains L1.t1 L1 repetitive element;
2948	15564	28038	1.02	3.0E-06	AA868218.1	EST_HUMAN	Homo sapiens PP1200 mRNA, complete cds
3304	15915		2.41	3.0E-06	AI857779.1	EST_HUMAN	ak48g11.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1409252 3' similar to contains LTR1.13
3851	16449	28911	1.06	3.0E-06	BE047094.1	EST_HUMAN	LTR1 repetitive element;
3851	16449	28912	1.06	3.0E-06	BE047094.1	EST_HUMAN	w122a05.x1 NCI_CGAP_U11 Homo sapiens cDNA clone IMAGE:2425616 3' similar to TR:O60734 O60734
4573	17156	28600	0.66	3.0E-06	T50266.1	EST_HUMAN	LINE-1 LIKE PROTEIN :contains L1.12 L1 repetitive element ;
4681	17243	28697	4.82	3.0E-06	X54816.1	NT	hg64d12.x1 NCI_CGAP_HN13 Homo sapiens cDNA clone IMAGE:3124151 3'
5045	17618	30063	0.94	3.0E-06	JO4038.1	NT	hg64d12.x1 NCI_CGAP_HN13 Homo sapiens cDNA clone IMAGE:3124151 3'
5045	17618	30064	0.94	3.0E-06	JO4038.1	NT	hg64d12.x1 NCI_CGAP_HN13 Homo sapiens cDNA clone IMAGE:3124151 3'
6308	18915	31989	0.78	3.0E-06	AJ159412.1	EST_HUMAN	y678b10.r1 Stratagene ovary (H337217) Homo sapiens cDNA clone IMAGE:77275 5' similar to contains L1 repetitive element
7280	19808		2.79	3.0E-06	P08548	SWISSPROT	Homo sapiens gene for alpha-1-microglobulin-bikunin, exons 1-5 (encoding alpha-1-microglobulin, N-terminus.)
8027	20569	33473	0.72	3.0E-06	BE562984.1	EST_HUMAN	Human glyceraldehyde-3-phosphate dehydrogenase (GAPDH) gene, complete cds
8618	21157	34070	0.69	3.0E-06	P07743	SWISSPROT	Human glyceraldehyde-3-phosphate dehydrogenase (GAPDH) gene, complete cds
							AU159412 THYRO1 Homo sapiens cDNA clone THYRO1001602 3'
							LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
							601336213F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3690314 5'
							PAROTID SECRETORY PROTEIN PRECURSOR (PSP)

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
12152	24394		13.37	3.0E-06	AW385282.1	EST_HUMAN	RC0-LT0001-261189-011-A03 LT0001 Homo sapiens cDNA
216	12877		2.91	2.0E-06	P54366	SWISSPROT	HOMEOBOX PROTEIN GOOSECOID
1614	14207		4.46	2.0E-06	P21414	SWISSPROT	POL POLYPROTEIN [CONTAINS: PROTEASE; REVERSE TRANSCRIPTASE; ENDONUCLEASE]
2418	14986	27560	2.2	2.0E-06	A1672138.1	EST_HUMAN	wa04a03.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2297068 3' similar to contains MER30.b1
2506	15070	27643	1.79	2.0E-06	P04929	SWISSPROT	MER30 repetitive element;
2601	15163	27731	1.34	2.0E-06	P08719	SWISSPROT	HISTIDINE-RICH GLYCOPROTEIN PRECURSOR
3570	16174	28658	1.04	2.0E-06	AV657555.1	EST_HUMAN	KNOB-ASSOCIATED HISTIDINE-RICH PROTEIN PRECURSOR (KAHRP)
3825	16425	28887	1.85	2.0E-06	AA173518.1	EST_HUMAN	AV657555 GLC Homo sapiens cDNA clone G1CFCB05 3'
3836	16435	28897	0.63	2.0E-06	AW450215.1	EST_HUMAN	zp02a05.r1 Stragene ovarian cancer (#937219) Homo sapiens cDNA clone IMAGE:595232 5'
3844	16443	28904	1.74	2.0E-06	AB030896.1	NT	UI-H-B13-aky-g-05-Q-U1.s1 NCI_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:2736176 3'
6239	18848		0.79	2.0E-06	AA974932.1	EST_HUMAN	Mus musculus gene for odorant receptor A16, complete cds
6267	18875	31643	0.87	2.0E-06	A1539448.1	EST_HUMAN	on34h01.s1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1558609 3' similar to contains Alu repetitive element;
6570	19168	31965	4.94	2.0E-06	A1819424.1	EST_HUMAN	te51f05.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2090241 3' similar to TR:Q13537
7858	20400		0.89	2.0E-06	AW869223.1	EST_HUMAN	Q13537 MER37 TRANSPORTABLE ELEMENT, COMPLETE CONSENSUS SEQUENCE. ;
8033	20575	33480	0.75	2.0E-06	T12238.1	EST_HUMAN	wj50b04.x1 NCI_CGAP_Lym12 Homo sapiens cDNA clone IMAGE:2410063 3'
8770	21309		0.59	2.0E-06	AA772497.1	EST_HUMAN	MR3-SN0067-120400-002-f02 SN0067 Homo sapiens cDNA
8782	21321	34245	1.54	2.0E-06	H62051.1	EST_HUMAN	A447R Heart Homo sapiens cDNA clone A447
9143	21678	34621	0.91	2.0E-06	AF003529.1	NT	zh27c11.s1 Soares pineal_gland_N3HPG Homo sapiens cDNA clone IMAGE:413300 3' similar to
9143	21678	34622	0.91	2.0E-06	AF003529.1	NT	TR:P70467 P70467 REVERSE TRANSCRIPTASE ;
9617	22117	35080	0.72	2.0E-06	N30576.1	EST_HUMAN	wj37c04.r1 Soares ovary tumor N8HOT Homo sapiens cDNA clone IMAGE:235974 5' similar to gb:X74929
9833	22331		0.63	2.0E-06	AV748969.1	EST_HUMAN	KERATIN, TYPE II CYTOSKELETAL 8 (HUMAN);
12052	25046	30508	1.61	2.0E-06	P23249	SWISSPROT	Homo sapiens glypican 3 (GPC3) gene, partial cds and flanking repeat regions
12210	24434		6.63	2.0E-06	BE328232.1	EST_HUMAN	Homo sapiens glypican 3 (GPC3) gene, partial cds and flanking repeat regions
36	12715	25174	1.77	1.0E-06	O76082	SWISSPROT	hw66e03.s1 Soares placenta_8tc9weeks_2NbHP8td9W Homo sapiens cDNA clone IMAGE:257212 3'
685	13309	25794	1.45	1.0E-06	AF084364.1	NT	AV748969 NPC Homo sapiens cDNA clone NPCAXD05 5'
1500	14092	26631	2.08	1.0E-06	P09125	SWISSPROT	PROTEIN MOV-10
							hs92f02.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3144699 3' similar to contains L1.12 L1 repetitive element ;
							ORGANIC CATION/CARNITINE TRANSPORTER 2 (SOLUTE CARRIER FAMILY 22, MEMBER 5) (HIGH-AFFINITY SODIUM-DEPENDENT CARNITINE COTRANSPORTER)
							Mus musculus D6Mm5E protein (D6Mm5e) mRNA, complete cds
							MEROZOITE SURFACE PROTEIN CMZ-8

Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1571	14184	26695	1.12	1.0E-06	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
1627	14220		1.54	1.0E-08	P27625	SWISSPROT	DNA-DIRECTED RNA POLYMERASE III LARGEST SUBUNIT
2037	14619	27186	8.38	1.0E-06	AF184614.1	NT	Homo sapiens p47-phox (NCF1) gene, complete cds
2037	14619	27187	8.38	1.0E-06	AF184614.1	NT	Homo sapiens p47-phox (NCF1) gene, complete cds
4459	17045	29488	14.7	1.0E-06	U07561.1	NT	Human ABL gene, exon 1b and intron 1b, and putative M8604 Met protein (M8604 Met) gene, complete cds
5269	17831	30256	0.89	1.0E-06	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
5269	17831	30257	0.89	1.0E-06	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
5494	18128	30536	4.64	1.0E-06	BF333015.1	EST_HUMAN	MR1-BT0800-030700-002-c06 BT0800 Homo sapiens cDNA
5518	18150	30563	1.08	1.0E-06	BE834518.1	EST_HUMAN	MR3-FN0004-090600-001-e04 FN0004 Homo sapiens cDNA
5518	18150	30564	1.08	1.0E-06	BE834518.1	EST_HUMAN	MR3-FN0004-090600-001-e04 FN0004 Homo sapiens cDNA
5667	18294	30774	1.13	1.0E-06	O60613	SWISSPROT	15 KDA SELENOPROTEIN PRECURSOR
6954	19531	32356	5.96	1.0E-06	P02671	SWISSPROT	FIBRINOGEN ALPHA1/ALPHA-E CHAIN PRECURSOR
7943	20485		0.68	1.0E-06	AA812623.1	EST_HUMAN	o29c08.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1524878 3'
8216	20757	33671	1.21	1.0E-06	A1347010.1	EST_HUMAN	qp54e02.x1 NCL_CGAP_C08 Homo sapiens cDNA clone IMAGE:1828842 3'
8425	20985	33879	1.23	1.0E-06	A1287878.1	EST_HUMAN	qv23f08.x1 NCL_CGAP_Lym6 Homo sapiens cDNA clone IMAGE:1882435 3' similar to contains element
9228	21950	34899	0.98	1.0E-06	N74635.1	EST_HUMAN	za55e01.s1 Soares fetal liver spleen 1NLS Homo sapiens cDNA clone IMAGE:268472 3'
9301	21901	34850	0.5	1.0E-06	Q39575	SWISSPROT	DYNEIN GAMMA CHAIN, FLAGELLAR OUTER ARM
9600	22100	35062	3.34	1.0E-06	U82668.1	NT	Homo sapiens shox gene, alternatively spliced products, complete cds
9600	22100	35063	3.34	1.0E-06	U82668.1	NT	Homo sapiens shox gene, alternatively spliced products, complete cds
9643	22143	35111	4.36	1.0E-06	AA132611.1	EST_HUMAN	zo17e08.r1 Stralagene colon (#937204) Homo sapiens cDNA clone IMAGE:587174 5'
9703	22202		3.84	1.0E-06	AA449257.1	EST_HUMAN	zo04d11.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:785493 3' similar to
10382	22876		1.61	1.0E-06	AL163203.2	NT	gB.D26128 RIBONUCLEASE PANCREATIC PRECURSOR (HUMAN);
11502	23951		6.24	1.0E-06	AW890941.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C003
12087	24356	30966	7.83	1.0E-06	L78810.1	NT	RC4-NT0054-120500-012-b03 NT0054 Homo sapiens cDNA
12195	14619	27186	1.67	1.0E-06	AF184614.1	NT	Homo sapiens ADP/ATP carrier protein (ANT-2) gene, complete cds
12195	14619	27187	1.67	1.0E-06	AF184614.1	NT	Homo sapiens p47-phox (NCF1) gene, complete cds
12603	14220		1.38	1.0E-06	P27625	SWISSPROT	Homo sapiens p47-phox (NCF1) gene, complete cds
383	13030	25518	2.01	9.0E-07	AF003529.1	NT	DNA-DIRECTED RNA POLYMERASE III LARGEST SUBUNIT
383	13030	25519	2.01	9.0E-07	AF003529.1	NT	Homo sapiens glypican 3 (GPC3) gene, partial cds and flanking repeat regions
8346	20887		0.57	9.0E-07	AL163280.2	NT	Homo sapiens glypican 3 (GPC3) gene, partial cds and flanking repeat regions
11126	23634	36875	2.95	9.0E-07	AL163281.2	NT	Homo sapiens chromosome 21 segment HS21C080

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4885	17460	29912	5.02	8.0E-07	A1288596.1	EST_HUMAN	ql82g07.x1 Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:1878876 3'
4885	17460	29913	5.02	8.0E-07	A1288596.1	EST_HUMAN	ql82g07.x1 Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:1878876 3'
6047	18666		7.49	8.0E-07	P21414	SWISSPROT	POLYPROTEIN [CONTAINS: PROTEASE; REVERSE TRANSCRIPTASE; ENDONUCLEASE]
7944	20486		9.51	8.0E-07	AF135416.1	NT	Homo sapiens UDP-glucuronosyltransferase gene, complete cds
11486	23935		8.73	8.0E-07	T07770.1	EST_HUMAN	EST05660 Fetal brain, Stragene (cat#936206) Homo sapiens cDNA clone HFBEN89
11690	24106		7.99	8.0E-07	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
1806	14491	27052	1.14	7.0E-07	AF167341.1	NT	Homo sapiens membrane interleukin 1 receptor accessory protein (L1RAP) gene, exons 10 and 11
5710	18336	30841	0.69	7.0E-07	6005700	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 8 (ABCA8), mRNA
5710	18336	30842	0.69	7.0E-07	6005700	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 8 (ABCA8), mRNA
10642	23174	36186	1.59	7.0E-07	BE676948.1	EST_HUMAN	733g01.x1 NCI_CGAP_CLL1 Homo sapiens cDNA clone IMAGE:3296496 3' similar to TR:Q96897 Q96897
1956	14540	27096	2.56	6.0E-07	AW855558.1	EST_HUMAN	ENDOGENOUS RETROVIRUS-K, LTR US AND GAG GENE ;
							CM3-CT0277-221099-024-e11 CT0277 Homo sapiens cDNA
2534	15098	27671	2.3	6.0E-07	AF019413.1	NT	Homo sapiens HLA class III region containing tenascin X (tenascin-X) gene, partial cds; cytochrome P450 21-hydroxylase (CYP21B), complement component C4 (C4B) G11, helicase (SKI2W), RD, complement factor B (Bf), and complement component C2 (C2) genes;>
4044	16842		1.76	6.0E-07	P41479	SWISSPROT	HYPOTHETICAL 24.1 KD PROTEIN IN LEF4-P33 INTERGENIC REGION
9068	21605	34536	1.94	6.0E-07	BF001867.1	EST_HUMAN	7g94f07.x1 NCI_CGAP_Co16 Homo sapiens cDNA clone IMAGE:3314149 3' similar to TR:O75920 O75920 4FSL ;
11625	24067	37131	1.83	6.0E-07	A1792950.1	EST_HUMAN	cm87f05.y6 NCI_CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1554177 5'
11949	24989		2.85	6.0E-07	AW903222.1	EST_HUMAN	GM4-NN1029-250300-121-h12 NN1029 Homo sapiens cDNA
348	12999		1.19	5.0E-07	A1831883.1	EST_HUMAN	wh84f10.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2385547 3'
1095	13700		2.21	5.0E-07	AA380630.1	EST_HUMAN	EST83615 Supt cells Homo sapiens cDNA 5' end
3066	15681		0.64	5.0E-07	A1831883.1	EST_HUMAN	wh84f10.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2385547 3'
4751	17332	29775	1.32	5.0E-07	AF149774.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 4 through 14 and complete cds
6288	18876	31644	1.13	5.0E-07	U65067.1	NT	Mus musculus OG-2 homeodomain protein (OG-2) gene, partial cds
7124	19464	32281	1.56	5.0E-07	A1939981.1	EST_HUMAN	tg06b05.x1 NCI_CGAP_CLL1 Homo sapiens cDNA clone IMAGE:2107953 3' similar to contains Alu repetitive element; contains element A3R repetitive element ;
7124	19464	32282	1.56	5.0E-07	A1939981.1	EST_HUMAN	tg06b05.x1 NCI_CGAP_CLL1 Homo sapiens cDNA clone IMAGE:2107953 3' similar to contains Alu repetitive element; contains element A3R repetitive element ;
7386	19912	32776	16.07	5.0E-07	AW070885.1	EST_HUMAN	xs31a02.x1 NCI_CGAP_Br18 Homo sapiens cDNA clone IMAGE:2568362 3' similar to gb:X15341 CYTOCHROME C OXIDASE POLYPEPTIDE VIA-LIVER (HUMAN);
8217	20758	33672	0.82	5.0E-07	Q9WUQ1	SWISSPROT	ADAM-TS 1 PRECURSOR (A DISINTEGRIN AND METALLOPROTEINASE WITH THROMBOSPONDIN MOTIFS 1) (ADAMTS-1) (ADAM-TS1)

Table 4

## Single Exon Probes Expressed In Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8427	20987		1.08	5.0E-07	P08993	SWISSPROT	S-ANTIGEN PROTEIN PRECURSOR
10270	22765	35752	4.46	5.0E-07	A1908587.1	EST_HUMAN	OM-BT178-220489-014 BT178 Homo sapiens cDNA
10542	23079	36063	1.56	5.0E-07	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
11391	23843	36607	4.94	5.0E-07	P11087	SWISSPROT	COLLAGEN ALPHA 1(I) CHAIN PRECURSOR
11452	23902		2.43	5.0E-07	A1271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
12391	24889		2.85	5.0E-07	AW862537.1	EST_HUMAN	QV0-CT0383-210400-204-b12 CT0383 Homo sapiens cDNA
4071	16667	28128	1.94	4.0E-07	AW009602.1	EST_HUMAN	ws84h05.x1 NCI_CGAP_C03 Homo sapiens cDNA clone IMAGE:2504697 3'
7230	19761		0.98	4.0E-07	A1272285.1	NT	Homo sapiens SPP2 gene for secreted phosphoprotein 24 precursor, exons 1-8
7311	19839	32697	1.35	4.0E-07	Q9Z2V6	SWISSPROT	HISTONE DEACETYLASE 5 (HD5) (HISTONE DEACETYLASE MHDAT1)
7311	19839	32698	1.35	4.0E-07	Q9Z2V8	SWISSPROT	HISTONE DEACETYLASE 5 (HD5) (HISTONE DEACETYLASE MHDAT1)
7863	20405	33312	0.85	4.0E-07	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
8981	21519	34445	5.37	4.0E-07	AW419134.1	EST_HUMAN	xy49g11.x1 NCI_CGAP_Lu34.1 Homo sapiens cDNA clone IMAGE:2656548 3'
10228	22723	35715	0.5	4.0E-07	AL163218.2	NT	Homo sapiens chromosome 21 segment HS21C018
10817	23338	36351	4.05	4.0E-07	A1765528.1	EST_HUMAN	w81b08.x1 NCI_CGAP_K1d12 Homo sapiens cDNA clone IMAGE:2389703 3'
10817	23338	36352	4.05	4.0E-07	A1765528.1	EST_HUMAN	w81b08.x1 NCI_CGAP_K1d12 Homo sapiens cDNA clone IMAGE:2389703 3'
11100	23810		2.06	4.0E-07	BE001828.1	EST_HUMAN	PM1-BN0083-030300-003-a12 BN0083 Homo sapiens cDNA
466	13100	25591	4.51	3.0E-07	U19719.1	NT	Human microfibri-associated glycoprotein (MFAP2) gene, putative promoter region and alternatively spliced untranslated exons
609	13237	25711	2.64	3.0E-07	A1271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
1417	14010	26539	1.65	3.0E-07	M99149.1	NT	Human polymorphic microsatellite DNA
1667	14260		1.95	3.0E-07	M64857.1	NT	Human IgK subgroup I germline gene, exons 1 and 2, V-region 018 allele
2090	14670		3.87	3.0E-07	AA526763.1	EST_HUMAN	ni56b09.s1 NCI_CGAP_Ov2 Homo sapiens cDNA clone IMAGE:980825 similar to contains Alu repetitive element; contains L1; L2 L1 repetitive element ;
2327	14898	27471	1.72	3.0E-07	M99149.1	NT	Human polymorphic microsatellite DNA
2508	15072	27645	6.56	3.0E-07	BE005077.1	EST_HUMAN	MRO-BN0115-020300-001-f11 BN0115 Homo sapiens cDNA
2508	15072	27646	6.56	3.0E-07	BE005077.1	EST_HUMAN	MRO-BN0115-020300-001-f11 BN0115 Homo sapiens cDNA
3069	15684	28156	0.79	3.0E-07	T64704.1	EST_HUMAN	y450f12.r1 Soares fetal liver spleen INFLS Homo sapiens cDNA clone IMAGE:111695 5'
3195	15907	28280	2.03	3.0E-07	P38739	SWISSPROT	HYPOTHETICAL 63.8 KD PROTEIN IN GUT1-RIM1 INTERGENIC REGION PRECURSOR
4788	17368		0.58	3.0E-07	P20740	SWISSPROT	OVOSTATIN PRECURSOR (OVOMACROGLOBULIN)
4834	17412	29865	7.74	3.0E-07	AV650201.1	EST_HUMAN	AV650201 GLC Homo sapiens cDNA clone GLCCGD01 3'
4878	17453	28905	0.71	3.0E-07	A1797236.1	EST_HUMAN	we88b12.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2347967 3'
5222	17787	30205	1.81	3.0E-07	T57850.1	EST_HUMAN	yc14h09.s1 Stratiogene lung (#837210) Homo sapiens cDNA clone IMAGE:80705 3' similar to similar to gb:162982 ARACHIDONATE 12-LIPOXYGENASE (HUMAN)

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5222	17787	30206	1.81	3.0E-07	T57850.1	EST_HUMAN	yc14h09.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:80705 3' similar to similar to gb:M62982 ARACHIDONATE 12-LIPOXYGENASE (HUMAN)
5847	18471	31197	12.79	3.0E-07	O69807	SWISSPROT	PROTEIN-ARGININE DEIMINASE TYPE IV (PEPTIDYLARGININE DEIMINASE IV) (PAD-R4)
6128	18743	31496	0.71	3.0E-07	O42280	SWISSPROT	(PEPTIDYLARGININE DEIMINASE TYPE ALPHA)
6804	19395		5.41	3.0E-07	A4815175.1	EST_HUMAN	WNT-14 PROTEIN PRECURSOR
7519	20039	32908	3.22	3.0E-07	AW797168.1	EST_HUMAN	cc04c10.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1339890 3'
7659	20171		1.6	3.0E-07	A1591065.1	EST_HUMAN	QV1-JM0036-200300-115-g02 UM0036 Homo sapiens cDNA
11373	23825		1.68	3.0E-07	BE439409.1	EST_HUMAN	tw28f11.x1 NCL_CGAP_Ov65 Homo sapiens cDNA clone IMAGE:2261037 3' similar to contains Alu repetitive element; contains element MSR1 MSR1 repetitive element ;
12841	24716		6.74	3.0E-07	A132352.1	NT	HTM1-025F1 HTM1 Homo sapiens cDNA
31	12710	25168	3.36	2.0E-07	AF262988.1	NT	Rattus norvegicus mRNA for 45 kDa secretory protein, partial
165	12828	25314	7.91	2.0E-07	L77569.1	NT	Homo sapiens TRF2-interacting telomeric RAP1 protein (RAP1) mRNA, complete cds
165	12828	25315	7.91	2.0E-07	L77569.1	NT	Homo sapiens DGeorge syndrome critical region, telomeric end
194	12854	25338	45.53	2.0E-07	U36849.1	NT	Homo sapiens DGeorge syndrome critical region, telomeric end
778	13397	25898	2.58	2.0E-07	AF003530.1	NT	Fugu rubripes beta-cytoplasmic(vascular) actin gene, complete cds
778	13397	25899	2.58	2.0E-07	AF003530.1	NT	Homo sapiens homeobox protein CDX4 (CDX4) gene, complete cds and flanking repeat regions
791	13409		0.91	2.0E-07	P11369	SWISSPROT	Homo sapiens homeobox protein CDX4 (CDX4) gene, complete cds and flanking repeat regions
979	13591	26106	2.56	2.0E-07	AA223260.1	EST_HUMAN	RETROVIRUS-RELATED POLYPROTEIN (CONTAINS: REVERSE TRANSCRIPTASE ; ENDONUCLEASE)
980	13592	26107	6.66	2.0E-07	T63042.1	EST_HUMAN	z08b07.s1 Stratagene NT2 neuronal precursor 937230 Homo sapiens cDNA clone IMAGE:650869 3' similar to gb:L31860 GLYCOPHORIN A PRECURSOR (HUMAN); contains Alu repetitive element;
1205	13805	26318	0.76	2.0E-07	Q26768	SWISSPROT	yc15g04.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:80790 3' similar to contains L1 repetitive element ;
1844	14238	26771	1.88	2.0E-07	Q09701	SWISSPROT	I/6 AUTOANTIGEN
3679	18280		0.65	2.0E-07	BF131397.1	EST_HUMAN	HYPOTHETICAL 72.5 KD PROTEIN C2F7.10 IN CHROMOSOME 1
3751	16352	28820	22.38	2.0E-07	AF125348.1	NT	601818916F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:4044891 5'
5547	18179	30593	1.81	2.0E-07	AW898066.1	EST_HUMAN	Homo sapiens cavedin 1 (CAV1) gene, exon 3 and partial cds
6769	19362	32171	1.59	2.0E-07	A1208715.1	EST_HUMAN	RC3-NN0066-260400-021-g11 NN0066 Homo sapiens cDNA
8405	20945		3.57	2.0E-07	AV729390.1	EST_HUMAN	qg56405.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1839177 3'
8628	21167	34082	1.1	2.0E-07	AA035198.1	EST_HUMAN	AV729390 HTC Homo sapiens cDNA clone HTCAEG02 5'
9676	22175		2.27	2.0E-07	AL163303.2	NT	zk27g09.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:471808 3'
10168	22663	35658	5.85	2.0E-07	AW892507.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C103
							CM4-NN0003-280300-124-e06 NN0003 Homo sapiens cDNA



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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10383	22877	35888	0.75	2.0E-07	P00751	SWISSPROT	COMPLEMENT FACTOR B PRECURSOR (C3/C5 CONVERTASE) (PROPERDIN FACTOR B) (GLYCINE-RICH BETA GLYCOPROTEIN) (GBG) (PBF2)
10383	22877	35869	0.75	2.0E-07	P00751	SWISSPROT	COMPLEMENT FACTOR B PRECURSOR (C3/C5 CONVERTASE) (PROPERDIN FACTOR B) (GLYCINE-RICH BETA GLYCOPROTEIN) (GBG) (PBF2)
11642	24603		2.57	2.0E-07	BE153717.1	EST_HUMAN	PM0-HT0339-260100-006-H07 HT0339 Homo sapiens cDNA
11734	24890		3.56	2.0E-07	A1732462.1	EST_HUMAN	zn85h11.x5 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:565028 3' similar to contains THR.b2 THR repetitive element
1141	13744		1.17	1.0E-07	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21C082
2013	14595	27157	0.97	1.0E-07	AL163213.2	NT	Homo sapiens chromosome 21 segment HS21C013
2013	14595	27158	0.97	1.0E-07	AL163213.2	NT	Homo sapiens chromosome 21 segment HS21C013
2424	14892	27565	0.93	1.0E-07	P10263	SWISSPROT	RETROVIRUS-RELATED GAG POLYPROTEIN (VERSION 1)
2854	14162	26693	2.94	1.0E-07	P09256	SWISSPROT	GLYCOPROTEIN GPV
3807	13744		1.22	1.0E-07	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21C082
4380	16967	29413	2.75	1.0E-07	AV718692.1	EST_HUMAN	AV718692 GLC Homo sapiens cDNA clone GLCFNF04 5'
4380	16967	29414	2.75	1.0E-07	AV718692.1	EST_HUMAN	AV718692 GLC Homo sapiens cDNA clone GLCFNF04 5'
							Homo sapiens chromosome Xq28 melanoma antigen family A2a (MAGEA2A), melanoma antigen family A12 (MAGEA12), melanoma antigen family A2b (MAGEA2B), melanoma antigen family A3 (MAGEA3), caltractin (CALT), NAD(P)H dehydrogenase-like protein (NSDHL), and L1>
6827	19223	32028	1.57	1.0E-07	U82871.2	NT	tz43d06.y1 NCI_CGAP_Brm52 Homo sapiens cDNA clone IMAGE:2291339 5'
6950	19527	32349	4.57	1.0E-07	BE047871.1	EST_HUMAN	tz43d06.y1 NCI_CGAP_Brm52 Homo sapiens cDNA clone IMAGE:2291339 5'
6950	19527	32350	4.57	1.0E-07	BE047871.1	EST_HUMAN	tz43d06.y1 NCI_CGAP_Brm52 Homo sapiens cDNA clone IMAGE:2291339 5'
7504	20026	32890	8.62	1.0E-07	N55081.1	EST_HUMAN	PM4-TN0024-030800-002-b05 TN0024 Homo sapiens cDNA
7944	20156	33042	0.82	1.0E-07	BF375909.1	EST_HUMAN	PM4-TN0024-030800-002-b05 TN0024 Homo sapiens cDNA
7844	20156	33043	0.82	1.0E-07	BF375909.1	EST_HUMAN	PM4-TN0024-030800-002-b05 TN0024 Homo sapiens cDNA
7669	20181	33068	1.35	1.0E-07	AL163281.2	NT	Homo sapiens chromosome 21 segment HS21C081
8157	20688	33611	2.52	1.0E-07	P97435	SWISSPROT	ENTEROPEPTIDASE (ENTEROKINASE)
8157	20688	33612	2.52	1.0E-07	P97435	SWISSPROT	ENTEROPEPTIDASE (ENTEROKINASE)
8884	21422	34347	2.7	1.0E-07	AA693576.1	EST_HUMAN	z51te10.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:434348 3'
9194	21711	34654	1.05	1.0E-07	P57110	SWISSPROT	ADAM-TS 8 PRECURSOR (A DISINTEGRIN AND METALLOPROTEINASE WITH THROMBOSPONDIN MOTIFS 8) (ADAMTS-9) (ADAM-TS9) (METH-2)
9535	22035	34985	0.49	1.0E-07	BE327843.1	EST_HUMAN	hu28h06.x1 NCI_CGAP_Meth15 Homo sapiens cDNA clone IMAGE:3171419 3' similar to contains MER18.13
9849	22347	35328	2.51	1.0E-07	BF674524.1	EST_HUMAN	MER18 repetitive element
9855	22553	35334	1.19	1.0E-07	AA386311.1	EST_HUMAN	602137174F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4274428 5'
10362	22856		3.53	1.0E-07	AL163282.2	NT	EST185054 Brain IV Homo sapiens cDNA
							Homo sapiens chromosome 21 segment HS21C082

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
12013	24860	30704	2.42	1.0E-07	BE048770.1	EST_HUMAN	hr53c11.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3132212 3' similar to TR:O95722 O95722
7325	19852	32714	0.87	9.0E-08	AI539362.1	EST_HUMAN	DJ1163J1.1;
9802	22300	35285	2.1	9.0E-08	AV734819.1	EST_HUMAN	hs51b06.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2090195 3'
11061	23573	36610	3.41	9.0E-08	AI891052.1	EST_HUMAN	AV734819 cda Homo sapiens cDNA clone cdABF806 5'
11519	23987	37039	4.51	9.0E-08	AL163301.2	NT	wn30a07.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2446932 3' similar to contains OFR.12
11961	24283		2.98	9.0E-08	AJ251973.1	NT	OFR repetitive element;
635	15420		2.27	8.0E-08	AI911352.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C101
1088	13693		0.79	8.0E-08	BE795469.1	EST_HUMAN	Homo sapiens partial steerin-1 gene
3598	16202		1.05	8.0E-08	BE795469.1	EST_HUMAN	wd16b05.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2328273 3'
8674	21213	34133	3.54	8.0E-08	AI752367.1	EST_HUMAN	601590133F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943976 5'
8674	21213	34134	3.54	8.0E-08	AI752367.1	EST_HUMAN	601590133F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943976 5'
9545	22045	35006	3.32	8.0E-08	AW970693.1	EST_HUMAN	cn15c02.x1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBC_cn15c02 random
11124	23632		2.81	8.0E-08	AF253417.1	NT	EST382776 MAGe resequences, MAGK Homo sapiens cDNA
84	12760	25243	2.82	7.0E-08	Q02357	SWISSPROT	Homo sapiens microsomal epoxide hydrolase (EPHX1) gene, complete cds
1405	13998	26527	11.08	7.0E-08	X04809.1	NT	ANKYRIN 1 (ERYTHROCYTE ANKYRIN)
3635	16238	28713	0.7	7.0E-08	P15305	SWISSPROT	Rat mRNA for ribosomal protein L31
3635	16238	28714	0.7	7.0E-08	P15305	SWISSPROT	DYNEIN HEAVY CHAIN (DYHC)
4002	16600	29073	0.89	7.0E-08	P01806	SWISSPROT	DYNEIN HEAVY CHAIN (DYHC)
4002	16600	29074	0.89	7.0E-08	P01806	SWISSPROT	DYNEIN HEAVY CHAIN (DYHC)
10893	23223		6.5	7.0E-08	AI535743.1	EST_HUMAN	IG KAPPA CHAIN V-J REGION OU
11523	23971	37041	6.1	7.0E-08	U24070.1	NT	IG KAPPA CHAIN V-I REGION OU
12450	16238	28713	3.59	7.0E-08	P15305	SWISSPROT	cong3.P11 A5 conom Homo sapiens cDNA 3'
12450	16238	28714	3.59	7.0E-08	P15305	SWISSPROT	Rattus norvegicus Munc13-1 mRNA, complete cds
850	13466	25974	3.81	6.0E-08	AL163248.2	NT	DYNEIN HEAVY CHAIN (DYHC)
850	13466	25975	3.81	6.0E-08	AL163248.2	NT	DYNEIN HEAVY CHAIN (DYHC)
2401	14969	27543	2.01	6.0E-08	BE144398.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C048
4334	16921	29363	1.14	6.0E-08	AL163248.2	NT	MRO-HT0166-191-004-q09 HT0166 Homo sapiens cDNA
7892	20434		0.88	6.0E-08	P08547	SWISSPROT	Homo sapiens chromosome 21 segment HS21C048
9251	21777		0.6	6.0E-08	AA827075.1	EST_HUMAN	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
							ab56c05.s1 NCI_CGAP_G051 Homo sapiens cDNA clone IMAGE:1335388 3' similar to contains
							MER12.b3 MER12 repetitive element;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11293	23745	36802	2.61	6.0E-08	P11369	SWISSPROT	RETROVIRUS-RELATED POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ; ENDONUCLEASE]
11407	23858		1.77	6.0E-08	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
88	12784	25247	2.33	5.0E-08	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
2277	14851	27429	1.23	5.0E-08	AA498851.1	EST_HUMAN	nr03509.s1 NCI_CGAP_Thy1 Homo sapiens cDNA clone IMAGE:943183 similar to contains Alu repetitive element;
11692	24107		7.32	5.0E-08	P06881	SWISSPROT	COMPLEMENT C2 PRECURSOR (C3/C5 CONVERTASE)
11898	24233	31004	1.48	5.0E-08	AW851878.1	EST_HUMAN	QV0-CT0225-131099-034-a12 CT0225 Homo sapiens cDNA
1797	14387	26931	1.53	4.0E-08	P25723	SWISSPROT	DORSAL-VENTRAL PATTERNING TOLLID PROTEIN PRECURSOR
1797	14387	26932	1.53	4.0E-08	P25723	SWISSPROT	DORSAL-VENTRAL PATTERNING TOLLID PROTEIN PRECURSOR
2910	15527		1.49	4.0E-08	AL079581.1	EST_HUMAN	DKFZp434J0428.1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434J0428.5'
3100	15715		1.01	4.0E-08	AI078417.1	EST_HUMAN	cc05e02.x1 Soares_fetal_liver_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1674458 3' similar to contains Alu repetitive element;
3986	16584	29055	0.87	4.0E-08	U82688.1	NT	Homo sapiens shox gene, alternatively spliced products, complete cds
6537	19136	31929	1.14	4.0E-08	P52824	SWISSPROT	URIDINE PHOSPHORYLASE (UDRPASE)
8733	21272	34192	0.57	4.0E-08	O15393	SWISSPROT	TRANSMEMBRANE PROTEASE, SERINE 2
9066	21603	34533	0.92	4.0E-08	L42571.1	NT	Cricetulus griseus ribosomal transcription factor (UBF2) mRNA, complete cds
9563	22063		0.87	4.0E-08	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
10233	22728		0.71	4.0E-08	AI016342.1	EST_HUMAN	af78d12.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:1622903 3'
10287	22782	35774	3.59	4.0E-08	AI050027.1	EST_HUMAN	an22d10.x1 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:1699411 3' similar to contains Alu repetitive element; contains element MER22 repetitive element ;
10782	23306		1.7	4.0E-08	AJ238617.1	NT	Homo sapiens mRNA for UGA suppressor tRNA-associated antigenic protein (tRNA 48 gene)
10968	23483	36510	3.7	4.0E-08	BF692493.1	EST_HUMAN	602248024F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:4333300 5'
10968	23483	36511	3.7	4.0E-08	BF692493.1	EST_HUMAN	602248024F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:4333300 5'
11897	25022		1.4	4.0E-08	W76159.1	EST_HUMAN	z465g03.r1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:3455558 5' similar to contains L1.1 L1 repetitive element ;
12378	24546		3.48	4.0E-08	AI343353.1	EST_HUMAN	tb95a11.x1 NCI_CGAP_Cot18 Homo sapiens cDNA clone IMAGE:2062078 3' similar to contains MER18.53
5795	18420	31136	3.12	3.0E-08	BE018348.1	EST_HUMAN	MER18 MER18 repetitive element ;
7052	18071	30482	3.77	3.0E-08	AI792737.1	EST_HUMAN	bb78a10.y1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3048570 5' similar to TR-Q9Z158 Q9Z158 SYNTAXIN 17. ;
7545	20065	32939	1.41	3.0E-08	AL163246.2	NT	qs76111.y6 NCI_CGAP_Pt28 Homo sapiens cDNA clone IMAGE:1944045 5' Homo sapiens chromosome 21 segment HS21C049

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7730	20238		4.17	3.0E-08	AI436352.1	EST_HUMAN	th93h09.x1 Soares NSF F8 9W OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2126273 3' similar to TR:Q13537 Q13537 MER37 TRANSPORTABLE ELEMENT, COMPLETE CONSENSUS SEQUENCE. ;
9812	22310		0.51	3.0E-08	AF055068.1	NT	Homo sapiens MHC class 1 region
11662	24087		38.65	3.0E-08	R18420.1	EST_HUMAN	y902604.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:30948 5' similar to contains Alu repetitive element;
220	12881		6.74	2.0E-08	AW302966.1	EST_HUMAN	xt87f06.x1 NCI CGAP Lu26 Homo sapiens cDNA clone IMAGE:2767139 3'
247	12907		6.48	2.0E-08	AA425598.1	EST_HUMAN	zw48f07.r1 Soares total feus Nb2HF8 9w Homo sapiens cDNA clone IMAGE:773317 5' similar to contains Alu repetitive element; contains element MER15 repetitive element ;
522	13154	25637	2.59	2.0E-08	AF198349.1	NT	Gallus gallus Dach2 protein (Dach2) mRNA, complete cds
688	13312	25796	10.99	2.0E-08	AW886438.1	EST_HUMAN	MRO-O70080-240200-007-g08 OT0080 Homo sapiens cDNA
688	13312	25797	10.99	2.0E-08	AW886438.1	EST_HUMAN	MRO-O70080-240200-001-g08 OT0080 Homo sapiens cDNA
1027	13638		22.66	2.0E-08	BE280477.1	EST_HUMAN	601155321F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3138883 5'
1387	13981	26508	2.09	2.0E-08	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
1777	14367		1.3	2.0E-08	BE734871.1	EST_HUMAN	601570463F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3845199 5'
1895	14480		4.65	2.0E-08	AW270271.1	EST_HUMAN	xp43f11.x1 NCI CGAP HN11 Homo sapiens cDNA clone IMAGE:2743149 3'
2462	15029	27597	0.97	2.0E-08	AA731948.1	EST_HUMAN	nw64h01.s1 NCI CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1251409 3' similar to contains L1.L3 L1 repetitive element ;
2580	15143		2.21	2.0E-08	K00216.1	NT	Sheep His-rRNA-GUG
3243	15855	28337	6.85	2.0E-08	O42280	SWISSPROT	WNT-14 PROTEIN PRECURSOR
3243	15855	28338	6.85	2.0E-08	O42280	SWISSPROT	WNT-14 PROTEIN PRECURSOR
3926	16524		1.93	2.0E-08	AW813620.1	EST_HUMAN	RC3-ST0197-161099-012-b03 ST0197 Homo sapiens cDNA
4152	16744	29198	0.57	2.0E-08	U82668.1	NT	Homo sapiens shox gene, alternatively spliced products, complete cds
4494	17079		1.74	2.0E-08	AA456040.1	EST_HUMAN	aa26c07.r1 NCI CGAP_GCB1 Homo sapiens cDNA clone IMAGE:814380 5' similar to contains L1.L2 L1 repetitive element ;
5092	17665		3.83	2.0E-08	AW572881.1	EST_HUMAN	he17h08.x2 NCI CGAP_CML1 Homo sapiens cDNA clone IMAGE:2919327 3' similar to contains Alu repetitive element;
5817	18441	31163	0.87	2.0E-08	AA813204.1	EST_HUMAN	al60h11.s1 Soares testis NHT Homo sapiens cDNA clone 1377189 3'
5998	18618	31354	0.87	2.0E-08	AW088924.1	EST_HUMAN	xd32c04.x1 NCI CGAP_Ov23 Homo sapiens cDNA clone IMAGE:2595462 3' similar to contains MER18.b3 MER18 MER18 repetitive element ;
7946	20488	33398	1.07	2.0E-08	P10272	SWISSPROT	POL POLYPROTEIN [CONTAINS: PROTEASE ; REVERSE TRANSCRIPTASE ; ENDONUCLEASE]
8054	20596	33503	1.2	2.0E-08	AA490121.1	EST_HUMAN	ab02g06.s1 Stralagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:839874 3'
9014	21551		1.41	2.0E-08	AU139978.1	EST_HUMAN	AU139978 PLACE1 Homo sapiens cDNA clone PLACE1011719 5'

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10413	22807	35904	0.78	2.0E-08	N78097.1	EST_HUMAN	y7202.1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:248283 5' similar to contig1
10413	22807	35905	0.78	2.0E-08	N78097.1	EST_HUMAN	y7202.1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:248283 5' similar to contains
11982	24283		1.74	2.0E-08	AL163284.2	NT	LTR1.b3.LTR1 repetitive element ;
							Homo sapiens chromosome 21 segment HS21C084
12589	25073		1.44	2.0E-08	AF280107.1	NT	Homo sapiens cytochrome P450 polypeptide 43 (CYP3A43) gene, partial cds; cytochrome P450 polypeptide
1812	14402	26947	0.88	1.0E-08	AF125348.1	NT	4 (CYP3A4) and cytochrome P450 polypeptide 7 (CYP3A7) genes, complete cds; and cytochrome P450
2095	14874		2.74	1.0E-08	BE141859.1	EST_HUMAN	polypeptide 5 (CYP3A5) gene, partial cds
5785	18410	31126	4.23	1.0E-08	AJ010770.1	NT	Homo sapiens cavedin 1 (CAV1) gene, exon 3 and partial cds
7746	20254	33148	1.14	1.0E-08	P19474	SWISSPROT	PM2-HT0130-150899-001-112 HT0130 Homo sapiens cDNA
7978	20520	33426	0.55	1.0E-08	AL163302.2	NT	Homo sapiens hyperion gene, exons 1-50
							62 KD RO PROTEIN (SUGREN SYNDROME TYPE A ANTIGEN (SS-A)) (RQ(SS-A))
8070	20612	33525	0.85	1.0E-08	AF224689.1	NT	Homo sapiens chromosome 21 segment HS21C102
							Homo sapiens mimosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3
8070	20612	33526	0.85	1.0E-08	AF224689.1	NT	(UBE2D3) genes, complete cds
8484	21023	33940	1.84	1.0E-08	AJ015304.1	EST_HUMAN	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3
9132	21687	34608	0.75	1.0E-08	BE072572.1	EST_HUMAN	(UBE2D3) genes, complete cds
							alpha5a0.5.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1618738 3'
9876	22373	35350	1.16	1.0E-08	P79110	SWISSPROT	PM2-BT0546-210100-004-402 BT0546 Homo sapiens cDNA
10449	22843	35953	0.64	1.0E-08	P98083	SWISSPROT	TRICARBOXYLATE TRANSPORT PROTEIN PRECURSOR (CITRATE TRANSPORT PROTEIN) (GTP)
11195	23700	36751	3.79	1.0E-08	AF044083.1	NT	(TRICARBOXYLATE CARRIER PROTEIN)
12081	24353		2.27	1.0E-08	X51755.1	NT	BONE MORPHOGENETIC PROTEIN 1 PRECURSOR (BMP-1)
4327	16913	29356	3.93	9.0E-08	AL163279.2	NT	Homo sapiens major histocompatibility locus class III region
4327	16913	29357	3.83	9.0E-08	AL163279.2	NT	Homo sapiens major histocompatibility locus class III region
9974	22469		0.49	9.0E-08	T87950.1	EST_HUMAN	Human lambda-immunoglobulin constant region complex (germline)
							Homo sapiens chromosome 21 segment HS21C078
7309	19836	32694	8.63	8.0E-09	AI183500.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C079
7942	20484	33396	2.88	8.0E-08	AW900156.1	EST_HUMAN	y658a12.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:121918 3'
8919	21457		2.77	8.0E-08	AA938892.1	EST_HUMAN	q42a07.x1 Soares_fetal_NbH18W Homo sapiens cDNA clone IMAGE:1732164 3' similar to
							contains MSR1.1 MSR1 repetitive element ;
3687	16268		1.87	7.0E-09	D86942.1	NT	CMD-NIN1004-100300-273-e08 NN1004 Homo sapiens cDNA
4080	16676		1	7.0E-08	U50871.1	NT	op74d08.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1582575 3'
							Homo sapiens DNA for 3-kephacetyl-CoA thiolase beta-subunit of mitochondrial bifunctional protein, exon 2, 3
							Human familial Alzheimer's disease (STM2) gene, complete cds

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7843	20385		0.5	7.0E-09	BF108755.1	EST_HUMAN	7145e10.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3524443 3' similar to contains MER20.b2 MER29 repetitive element;
7991	20533		0.78	7.0E-09	AA256200.1	EST_HUMAN	zr80c05.r1 Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:681992 5' similar to contains L1.12 L1 repetitive element;
9184	21701	34844	2.99	7.0E-09	L09709.1	NT	Human lysosomal membrane glycoprotein-2 (LAMP2) gene, 5' end and flanking region
10086	22581	35574	1.3	7.0E-09	BE254850.1	EST_HUMAN	60111173F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3351834 5'
10248	22743		0.63	7.0E-09	AA058626.1	EST_HUMAN	zf58e07.s1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:381156 3' similar to contains L1.12 L1 repetitive element;
10552	23088		2.78	7.0E-09	T97950.1	EST_HUMAN	ye58a12.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:121918 3'
2198	14774		1.16	6.0E-09	AL040439.1	EST_HUMAN	DKFZp434C0514_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434C0514 5'
5116	17688	30126	5.44	6.0E-09	BE169421.1	EST_HUMAN	PM1-HT0527-160200-001-h05 HT0527 Homo sapiens cDNA
5246	17810	30232	1	6.0E-09	AW593471.1	EST_HUMAN	hg16f12.x1 NCI CGAP_G08 Homo sapiens cDNA clone IMAGE:2945807 3' similar to gb:X53743 FIBULIN-1, ISOFORM C PRECURSOR (HUMAN);
5246	17810	30233	1	6.0E-09	AW593471.1	EST_HUMAN	hg16f12.x1 NCI CGAP_G08 Homo sapiens cDNA clone IMAGE:2945807 3' similar to gb:X53743 FIBULIN-1, ISOFORM C PRECURSOR (HUMAN);
5582	18213	30662	12.11	6.0E-09	AW195784.1	EST_HUMAN	xr85h08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2701311 3'
8512	21051	33973	0.81	6.0E-09	BE161653.1	EST_HUMAN	MR3-HT0446-260300-201-h12 HT0446 Homo sapiens cDNA
9103	21639	34578	2.37	6.0E-09	4503710	NT	Homo sapiens fibroblast growth factor receptor 3 (achondroplasia, thanatophoric dwarfism) (FGFR3) mRNA
10177	22672		3.89	6.0E-09	AF200923.2	NT	Homo sapiens testis-specific kinase substrate (TKKS) gene, complete cds
10610	23143	36154	1.68	6.0E-09	BF108755.1	EST_HUMAN	7145e10.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3524443 3' similar to contains MER20.b2 MER29 repetitive element;
1460	14052	26584	3.95	5.0E-09	BE149264.1	EST_HUMAN	RC2-HT0252-120200-014-h10 HT0252 Homo sapiens cDNA
1893	14478	27038	0.93	5.0E-09	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
6542	19141	31933	2.29	5.0E-09	AA359454.1	EST_HUMAN	EST68746 Fetal lung II Homo sapiens cDNA 5' end
8521	21060	33983	0.59	5.0E-09	P37071	SWISSPROT	OLFACTORY RECEPTOR-LIKE PROTEIN COR5
10007	22502	35453	2.27	5.0E-09	AW799667.1	EST_HUMAN	PM2-UM0053-240300-005-c09 UM0053 Homo sapiens cDNA
547	13178		1.69	4.0E-09	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21C082
1000	13611		1.99	4.0E-09	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
1518	14110	26646	1.81	4.0E-09	9558718	NT	Homo sapiens hypodermal protein (AF038169), mRNA
2473	15040	27608	4.54	4.0E-09	AA350878.1	EST_HUMAN	EST58385 Infant brain Homo sapiens cDNA 5' end similar to similar to heat shock protein, 90 kDa
7788	20331	33237	0.72	4.0E-09	AA495747.1	EST_HUMAN	zw04c06.r1 Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:768298 5'
8459	20999	33915	0.62	4.0E-09	T64942.1	EST_HUMAN	yd11a07.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:66804 3'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10998	23510		1.73	4.0E-09	AA195142.1	EST_HUMAN	z34a12.r1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:665278 5' similar to gb:L07807
2390	14958	27530	6.63	3.0E-09	BE222239.1	EST_HUMAN	DYNAMIN-1 (HUMAN); hu09a09.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3168120 3' similar to contains MER18.13
2589	15151	27717	0.95	3.0E-09	BE222239.1	EST_HUMAN	MER18 repetitive element ; hu09a09.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3168120 3' similar to contains MER18.13
2677	15235	27802	1.22	3.0E-09	P23249	SWISSPROT	PROTEIN MOV-10 hu09a09.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3168120 3' similar to contains MER18.13
3372	15980	28457	1.05	3.0E-09	BE222239.1	EST_HUMAN	MER18 repetitive element ; z64a04.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:757422 5'
3423	16031		3.13	3.0E-09	AA442272.1	EST_HUMAN	H.sapiens PADPRP-1 gene for NAD(+) ADP-ribosyltransferase
4172	16763		3.54	3.0E-09	X16674.1	NT	Homo sapiens eukaryotic initiation factor 4A1 (EIF4A1) gene, partial cds
4517	17101	29548	5.18	3.0E-09	AF175325.1	NT	258.1 KDA PROTEIN C21ORF5 (K1AA0833)
4610	17193	29639	1.52	3.0E-09	Q9Y3R5	SWISSPROT	hu80a02.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3194090 3' similar to TR:O55091
7841	20383	33287	1.29	3.0E-09	BE465780.1	EST_HUMAN	O55081 IMPACT PROTEIN ; Homo sapiens chromosome 21 segment HS21C047
10146	22641	35631	1.98	3.0E-09	AL163247.2	NT	7172c08.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3527030 3'
10900	23420	36437	3.87	3.0E-09	BF109943.1	EST_HUMAN	7172c08.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3527030 3'
10900	23420	36438	3.87	3.0E-09	BF109943.1	EST_HUMAN	H.sapiens PADPRP-1 gene for NAD(+) ADP-ribosyltransferase
845	13461		1.01	2.0E-09	X16674.1	NT	Homo sapiens chromosome 21 segment HS21C084
1301	13895	26417	6.02	2.0E-09	AL163284.2	NT	DKFZp761B1710_r1 761 (synonym: ham2) Homo sapiens cDNA clone DKFZp761B1710 5'
1698	14291		10.31	2.0E-09	AL118573.1	EST_HUMAN	258.1 KDA PROTEIN C21ORF5 (K1AA0833)
2364	14935	27507	2.79	2.0E-09	Q9Y3R5	SWISSPROT	BRAIN-SPECIFIC ANGIOGENESIS INHIBITOR 2 PRECURSOR
4011	16809	29082	4.13	2.0E-09	O60241	SWISSPROT	q07d09.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1855793 3'
4083	16879	29139	0.94	2.0E-09	A1263479.1	EST_HUMAN	EST66142 Kidney IX Homo sapiens cDNA 5' end similar to EST containing L1 repeat
6876	19610		0.74	2.0E-09	AA357407.1	EST_HUMAN	z63h06.r1 Soares_tetal_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:798187 5' similar to contains
7474	19996	32861	8.48	2.0E-09	AA461430.1	EST_HUMAN	Alu repetitive element;
7532	20052	32925	0.68	2.0E-09	W28834.1	EST_HUMAN	52d11 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
8846	21185	34104	1.72	2.0E-09	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region, segment 1/2
11634	24074		1.72	2.0E-09	AF111168.2	NT	Homo sapiens serine palmitoyl transferase, subunit II gene, complete cds; and unknown genes
12238	13461		27.08	2.0E-09	X16674.1	NT	H.sapiens PADPRP-1 gene for NAD(+) ADP-ribosyltransferase
12310	25094		2.25	2.0E-09	AA226070.1	EST_HUMAN	nc11c02.r1 NCI_CGAP_P11 Homo sapiens cDNA clone IMAGE:1007810 similar to contains Alu repetitive element;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1032	13642		1.14	1.0E-09	W78152.1	EST_HUMAN	z079d03.s1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:346853 3' similar to
1148	13751	26280	2.3	1.0E-09	5031624	NT	gb.L02932 PEROXISOME PROLIFERATOR ACTIVATED RECEPTOR ALPHA (HUMAN);
1148	13751	26261	2.3	1.0E-09	5031624	NT	Homo sapiens CCAAT-box-binding transcription factor (CBF2) mRNA
2914	15531	28003	1.74	1.0E-09	U60017.1	NT	Homo sapiens CCAAT-box-binding transcription factor (CBF2) mRNA
2952	15568	28042	3.98	1.0E-09	M28699.1	NT	Homo sapiens basic transcription factor 2 p44 (btf2p44) gene, partial cds, neuronal apoptosis inhibitory
2952	15568	28043	3.98	1.0E-09	M28699.1	NT	protein (naip) and survival motor neuron protein (smn) genes, complete cds
3073	15688	28160	0.77	1.0E-09	BE535440.1	EST_HUMAN	Homo sapiens nucleolar phosphoprotein B23 (NPM1) mRNA, complete cds
4916	17491		5.48	1.0E-09	AA719297.1	EST_HUMAN	Homo sapiens nucleolar phosphoprotein B23 (NPM1) mRNA, complete cds
5694	18320	30819	0.87	1.0E-09	AL163283.2	NT	Homo sapiens nucleolar phosphoprotein B23 (NPM1) mRNA, complete cds
5896	18616	31352	1.46	1.0E-09	U07000.1	NT	Homo sapiens nucleolar phosphoprotein B23 (NPM1) mRNA, complete cds
6293	18901	31671	3.17	1.0E-09	P26694	SWISSPROT	601058602F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3445177 5'
8329	20870	33794	0.87	1.0E-09	AI688474.1	EST_HUMAN	z035b03.s1 Soares_pineal_gland_N3HPG Homo sapiens cDNA clone IMAGE:414029 3' similar to contains
10218	22711		2.57	1.0E-09	AL163283.2	NT	Alu repetitive element; contains element MER22 repetitive element;
12136	25032	30620	3.3	1.0E-09	U63630.2	NT	Homo sapiens chromosome 21 segment HS21C083
12593	24944		1.82	1.0E-09	AF260225.1	NT	Homo sapiens breakpoint cluster region (BCR) gene, complete cds
1352	13947	26471	1.48	9.0E-10	AW867740.1	EST_HUMAN	HUMAN breakpoint cluster region (BCR) gene, complete cds
2860	15479	27955	6.87	9.0E-10	AI870071.1	EST_HUMAN	CIRCUMSPOROZOITE PROTEIN PRECURSOR (CS)
6922	19581	32410	4.35	9.0E-10	AI452982.1	EST_HUMAN	wd39b05.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2330481 3' similar to contains
158	12821	25309	10.47	8.0E-10	U63630.2	NT	MER2511 MER25 repetitive element;
3386	15995	28472	0.59	8.0E-10	BE080748.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C083
4279	16865	28311	4.11	8.0E-10	AA376832.1	EST_HUMAN	Homo sapiens GTP binding protein 1 (GTPBP1), mRNA
9875	22372		2.34	8.0E-10	U36308.2	NT	Homo sapiens TESTIN 2 and TESTIN 3 genes, complete cds, alternatively spliced
730	13350	25844	24.84	7.0E-10		NT	MRO-SN0040-050500-002-c07 SN0040 Homo sapiens cDNA
730	13350	25845	24.84	7.0E-10		NT	we78h03.x1 Soares_Dieckgraebe_cdon_NHCD Homo sapiens cDNA clone IMAGE:2347253 3' similar to
1863	14256	26791	2.13	7.0E-10	Q13342	SWISSPROT	SW:RL28_HUMAN P47914 60S RIBOSOMAL PROTEIN L29 ; contains element PTR5 repetitive element ;
2067	14847		1.31	7.0E-10	P08548	SWISSPROT	y48b09.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2144537 3' similar to
2594	15156		13	7.0E-10	P08547	SWISSPROT	TR:O00372 O00372 PUTATIVE P150 ;
							Homo sapiens MCM4 (MCM4) and DNA-PKcs (PRKDC) genes, partial cds
							QV1-BT0631-150200-071-f01 BT0631 Homo sapiens cDNA
							EST89564 Small intestine I Homo sapiens cDNA 5' end
							Homo sapiens lens major intrinsic protein (MIP) gene, complete cds
							Homo sapiens TPA inducible protein (LOC51586) mRNA
							Homo sapiens TPA inducible protein (LOC51586) mRNA
							LYSP100 PROTEIN (LYMPHOID-RESTRICTED HOMOLOG OF SP100)
							LINE:1 REVERSE TRANSCRIPTASE HOMOLOG
							LINE:1 REVERSE TRANSCRIPTASE HOMOLOG



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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3124	15738	28206	2.84	7.0E-10	X00856.1	NT	H. sapiens DHFR gene, exon 3
6332	18938	31714	5.28	7.0E-10	AA345220.1	EST_HUMAN	EST51247 Gall bladder II Homo sapiens cDNA 5' end
7446	19970	32838	1.2	7.0E-10	BF352883.1	EST_HUMAN	IL3-HT0619-110700-209-D12 HT0619 Homo sapiens cDNA
7652	20164		1.43	7.0E-10	P35084	SWISSPROT	DNA-DIRECTED RNA POLYMERASE II LARGEST SUBUNIT
7916	20458	33364	1.88	7.0E-10	AF029701.2	NT	Homo sapiens presenilin-1 gene, exons 1 and 2
7916	20458	33365	1.88	7.0E-10	AF029701.2	NT	Homo sapiens presenilin-1 gene, exons 1 and 2
10212	22707	35701	0.57	7.0E-10	L08895.1	NT	Homo sapiens MAD5/MEF2-family transcription factor (MEF2C) mRNA, complete cds
11511	23959	37030	1.54	7.0E-10	AW778769.1	EST_HUMAN	h012902.x1 NCL_CGAP_C014 Homo sapiens cDNA clone IMAGE:3037202 3' similar to contains Alu repetitive element; contains MER7.b1 MER7 repetitive element;
946	13559	26072	3.68	6.0E-10	AJ400877.1	NT	Homo sapiens ASCL3 gene, CEGP1 gene, C11orf14 gene, C11orf15 gene, C11orf16 gene and C11orf17 gene
2702	15259	27827	1.89	6.0E-10	A1424405.1	EST_HUMAN	RC3-C10254-031099-012-g12 C10254 Homo sapiens cDNA
4847	17425		2.15	6.0E-10	AW853718.1	EST_HUMAN	E-SELECTIN PRECURSOR (ENDOTHELIAL LEUKOCYTE ADHESION MOLECULE 4)(ELAM-1) 3' end
8718	21257	34177	0.94	6.0E-10	P33730	SWISSPROT	(LEUKOCYTE-ENDOTHELIAL CELL ADHESION MOLECULE 2)(LECAM2) (CD82E)
8718	21257	34178	0.94	6.0E-10	P33730	SWISSPROT	(LEUKOCYTE-ENDOTHELIAL CELL ADHESION MOLECULE 2)(LECAM2) (CD82E)
9552	22052	35015	0.52	6.0E-10	P96073	SWISSPROT	ENTEROPEPTIDASE PRECURSOR (ENTEROKINASE)
11731	24138		1.47	6.0E-10	AW971923.1	EST_HUMAN	EST384012 IMAGE sequences; MAGL Homo sapiens cDNA
792	13410		5.2	5.0E-10	AL046804.1	EST_HUMAN	DKFZp434N219.1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434N219.5
3522	16127	28607	0.96	5.0E-10	Q01033	SWISSPROT	HYPOTHETICAL GENE 48 PROTEIN
5002	17575	30018	1.05	5.0E-10	AW028877.1	EST_HUMAN	w97b03.x1 NCL_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2542061 3' similar to contains MER10.11
5002	17575	30019	1.05	5.0E-10	AW028877.1	EST_HUMAN	w97b03.x1 NCL_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2542061 3' similar to contains MER10.11
5128	17700	30134	1.37	5.0E-10	AF181897.1	NT	Homo sapiens WRN (WRN) gene, complete cds
7363	19889		1.84	5.0E-10	BF105159.1	EST_HUMAN	601822184F1 NIH_MGC_75 Homo sapiens cDNA clone IMAGE:4042413 5'
9455	21981	34932	1.65	5.0E-10	P34678	SWISSPROT	HYPOTHETICAL 67.9 KD PROTEIN ZK688.8 IN CHROMOSOME III
9455	21981	34933	1.65	5.0E-10	P34678	SWISSPROT	HYPOTHETICAL 67.9 KD PROTEIN ZK688.8 IN CHROMOSOME III
116	12787		1.02	4.0E-10	A1221083.1	EST_HUMAN	qg09f09.x1 Soares_placenta_8weeks. 2NHP8109W Homo sapiens cDNA clone IMAGE:1759049 3' similar to contains LTR8.b2 LTR8 repetitive element;
607	13235	25709	0.73	4.0E-10	AA515260.1	EST_HUMAN	n64401.s1 NCL_CGAP_C03 Homo sapiens cDNA clone IMAGE:924648 3'
2039	14621	27189	1.17	4.0E-10	AW594709.1	EST_HUMAN	hg58g03.x1 NCL_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2949844 3' similar to contains Alu repetitive element;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2609	15171	27739	4.19	4.0E-10	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
7228	19759	32614	22.35	4.0E-10	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
10097	22592	35584	0.62	4.0E-10	AW283243.1	EST_HUMAN	UI-H-B12-ah1-a-07-Q-UI s1 NCI_CGAP Sub4 Homo sapiens cDNA clone IMAGE:2727061 3'
10342	22836	35831	1.01	4.0E-10	AI267342.1	EST_HUMAN	ep63h11.1 Starley Frontal SN pool 2 Homo sapiens cDNA clone IMAGE:20355653
948	13560	26074	1.95	3.0E-10	N36113.1	EST_HUMAN	Y63206.s1 Soares melanocyte 2Nbl-HM Homo sapiens cDNA clone IMAGE:272963 3' similar to contains L1.1 L1 repetitive element;
1395	13989		4.43	3.0E-10	AY005150.1	NT	Homo sapiens extracellular glycoprotein lectin precursor, gene, complete cds
4633	17216	29687	1.07	3.0E-10	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
4633	17216	29688	1.07	3.0E-10	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
5646	18274	30748	0.92	3.0E-10	N50109.1	EST_HUMAN	yz11g08 s1 Soares multiple sclerosis 2NblHMSP Homo sapiens cDNA clone IMAGE:282782 3'
6350	18955	31734	1.87	3.0E-10	P20350	SWISSPROT	RHOMBOD PROTEIN (VEINLET PROTEIN)
6492	19093	31877	2.86	3.0E-10	BE302970.1	EST_HUMAN	ba76d08.y1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2806319 5'
7737	20245	33136	2.3	3.0E-10	AV743302.1	EST_HUMAN	AV743302 CB Homo sapiens cDNA clone CBFBGD08 5'
7737	20245	33137	2.3	3.0E-10	AV743302.1	EST_HUMAN	AV743302 CB Homo sapiens cDNA clone CBFBGD08 5'
8665	21204	34122	1.08	3.0E-10	H87208.1	EST_HUMAN	y674b12 s1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:220511 3' similar to contains MER29 repetitive element;
8979	21517	34442	1.61	3.0E-10	AW850731.1	EST_HUMAN	IL3-CT0219-160200-064-B06 CT0219 Homo sapiens cDNA
8979	21517	34443	1.61	3.0E-10	AW850731.1	EST_HUMAN	IL3-CT0219-160200-064-B06 CT0219 Homo sapiens cDNA
9264	21790		0.86	3.0E-10	AF020503.1	NT	Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHIT) gene, exon 5
10359	22853		2.13	3.0E-10	T65891.1	EST_HUMAN	yc11e12.1r1 Stratagene lung (8637210) Homo sapiens cDNA clone IMAGE:80398 5'
10485	22979		1.71	3.0E-10	AA769294.1	EST_HUMAN	nc236g03 s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1289908 3'
12415	24568	30911	3.44	3.0E-10	BE179517.1	EST_HUMAN	IL3-HT0618-110500-136-E07 HT0618 Homo sapiens cDNA
38	12717	25176	92.79	2.0E-10	P48988	SWISSPROT	MAJOR CENTROMERE AUTOANTIGEN B (CENTROMERE PROTEIN B) (CENP-B)
38	12717	25177	92.79	2.0E-10	P48988	SWISSPROT	MAJOR CENTROMERE AUTOANTIGEN B (CENTROMERE PROTEIN B) (CENP-B)
1942	14526		2.33	2.0E-10	U80017.1	NT	Homo sapiens basic transcription factor 2 p44 (btf2p44) gene, partial cds, neuronal apoptosis inhibitory protein (nrip) and survival motor neuron protein (smn) genes, complete cds
3015	15631		0.66	2.0E-10	BF675047.1	EST_HUMAN	602136640F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4273377 5'
5971	18592		7.24	2.0E-10	Q28640	SWISSPROT	(HPRG)
6368	19001	31779	1.42	2.0E-10	AF280107.1	NT	Homo sapiens cytochrome P450 polypeptide 43 (CYP3A43) gene, partial cds; cytochrome P450 polypeptide 4 (CYP3A4) and cytochrome P450 polypeptide 7 (CYP3A7) genes, complete cds; and cytochrome P450 polypeptide 5 (CYP3A5) gene, partial cds
7414	19639	32803	7.79	2.0E-10	BE791082.1	EST_HUMAN	601566208F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3940824 5'

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7956	20498	33407	0.54	2.0E-10	P28809	SWISSPROT	POL POLYPROTEIN [CONTAINS: PROTEASE; REVERSE TRANSCRIPTASE; RIBONUCLEASE H]
7956	20498	33408	0.54	2.0E-10	P28809	SWISSPROT	POL POLYPROTEIN [CONTAINS: PROTEASE; REVERSE TRANSCRIPTASE; RIBONUCLEASE H]
9226	21742		0.85	2.0E-10	BF434565.1	EST_HUMAN	7a78d08.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3642303 3' similar to contains L1.13 L1 repetitive element:
1556	14148		2.26	1.0E-10	AW867787.1	EST_HUMAN	MFR0-SN0038-280300-001-f01 SN0038 Homo sapiens cDNA
1650	14242	26776	2.41	1.0E-10	AV652123.1	EST_HUMAN	AV652123 GLC Homo sapiens cDNA clone GLCCXA11 3'
2618	15180		1.78	1.0E-10	AW852001.1	EST_HUMAN	QV0-CT0225-191189-058-e08 C10225 Homo sapiens cDNA
3548	16152	28634	0.73	1.0E-10	AW832912.1	EST_HUMAN	QV2-TT0003-161189-013-g10 TT0003 Homo sapiens cDNA
3593	16197		0.62	1.0E-10	AL041685.1	EST_HUMAN	DKFZp434N1317.1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434N1317 5'
3911	16197		0.89	1.0E-10	AL041685.1	EST_HUMAN	DKFZp434N1317.1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434N1317 5'
4087	16883		6.83	1.0E-10	AF213884.1	NT	Homo sapiens nuclear factor of kappa light polypeptide gene enhancer in B-cells 1 (NFKB1) gene, complete cds
4207	16786	29243	5.77	1.0E-10	U52111.2	NT	Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Ca2+/Calmodulin-dependent protein kinase I (CAMKI), creatine transporter (CRTR), CDM protein (CDM), adrenoleukodystrophy protein >
4207	16786	29244	5.77	1.0E-10	U52111.2	NT	Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Ca2+/Calmodulin-dependent protein kinase I (CAMKI), creatine transporter (CRTR), CDM protein (CDM), adrenoleukodystrophy protein >
4214	16803	29253	1.95	1.0E-10	AB031089.1	NT	Homo sapiens PCCX1 mRNA for protein containing CXXC domain 1, complete cds
4249	16837		2.53	1.0E-10	M30829.1	NT	Human pregnancy-specific glycoprotein beta-1 (SP1) mRNA, last exon
5343	17904		1	1.0E-10	A1797745.1	EST_HUMAN	we8204.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2347615 3' similar to contains
8182	20723	33637	1.06	1.0E-10	AW408990.1	EST_HUMAN	MER31.11 MER31 repetitive element:
8589	21128		1.03	1.0E-10	A1268340.1	EST_HUMAN	TB_6A4 Fetal brain library Homo sapiens cDNA
10103	22598		4.16	1.0E-10	AA081888.1	EST_HUMAN	qtn04e10.x1 NCL_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1880874 3' similar to contains L1.11 L1 repetitive element:
10763	23316	36325	3.47	1.0E-10	AI038280.1	EST_HUMAN	zn23p05.r1 Stralagene neuroepithelium NT2RAM1 937234 Homo sapiens cDNA clone IMAGE:548314 5'
11672	18038		1.58	1.0E-10	X87344.1	NT	oy65h03.x1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1872881 3'
283	12839	25425	0.96	9.0E-11	BE145600.1	EST_HUMAN	H sapiens DMA, DMB, HLA-Z1, IPP2, LMP2, TAP1, LMP7, DOB, DOB2 and RING8, 9, 13 and 14 genes
2152	14729	27302	6.73	9.0E-11	AL134395.1	EST_HUMAN	IL2-H10203-291089-018-c08 H10203 Homo sapiens cDNA
2152	14729	27303	6.73	9.0E-11	AL134395.1	EST_HUMAN	DKFZp547D225.1 547 (synonym: hibr1) Homo sapiens cDNA clone DKFZp547D225 5'
3430	16038	28520	2.33	9.0E-11	AL134395.1	EST_HUMAN	DKFZp547D225.1 547 (synonym: hibr1) Homo sapiens cDNA clone DKFZp547D225 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3430	16038	28521	2.33	9.0E-11	AL134395.1	EST_HUMAN	DKFp547D225_r1 547 (synonym: hfb1) Homo sapiens cDNA clone DKFp547D225 5'
4598	17182	29629	0.69	9.0E-11	AA775985.1	EST_HUMAN	ae7801.s1 Strategene schizo brain S11 Homo sapiens cDNA clone IMAGE:970297 3'
5763	18389		3.77	9.0E-11	BE079780.1	EST_HUMAN	RC8-BT0627-140200-011-E08 BT0627 Homo sapiens cDNA
10058	22553	35548	0.98	9.0E-11	AA324960.1	EST_HUMAN	EST27872 Cerebellum II Homo sapiens cDNA 5' end
10058	22553	35549	0.98	9.0E-11	AA324960.1	EST_HUMAN	EST27872 Cerebellum II Homo sapiens cDNA 5' end
12059	24342	30999	3.52	9.0E-11	C16635.1	EST_HUMAN	C16635 Clontech human aorta polyA+ mRNA (#6572) Homo sapiens cDNA clone GEN:506808 5'
3150	15764		9.38	8.0E-11	H19971.1	EST_HUMAN	Yn53f1.s1 Soares adult brain N2b5HB55Y Homo sapiens cDNA clone IMAGE:172173 3' similar to contains L1 repetitive element
4035	16833	29102	0.68	8.0E-11	AA78817.1	EST_HUMAN	hm54c09.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2161938 3'
4117	16711	29165	5.2	8.0E-11	N23712.1	EST_HUMAN	yw46e06.s1 Weizmann Olfactory Epithelium Homo sapiens cDNA clone IMAGE:255298 3'
1497	14089	26629	2.94	7.0E-11	AA330642.1	EST_HUMAN	EST34382 Embryo, 6 week I Homo sapiens cDNA 5' end
3939	16537	28004	0.94	7.0E-11	AJ277546.2	NT	Homo sapiens WEE1 gene for protein kinase and partial ZNF143 gene for zinc finger transcription factor
8435	20975	33889	2.61	7.0E-11	AF163864.1	NT	Homo sapiens SNCA isoform (SNCA) gene, complete cds, alternatively spliced
10129	22824		1.1	7.0E-11	P11369	SWISSPROT	RETROVIRUS-RELATED POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ; ENDONUCLEASE]
12206	24430		1.52	7.0E-11	AV701656.1	EST_HUMAN	AV701656 ADB Homo sapiens cDNA clone ADBABC09 5'
437	13070	25566	5.57	6.0E-11	M55270.1	NT	Human matrix Gla protein (MGP) gene, complete cds
437	13070	25567	5.57	6.0E-11	M55270.1	NT	Human matrix Gla protein (MGP) gene, complete cds
6822	19412	32229	1.03	6.0E-11	L44140.1	NT	Homo sapiens chromosome X region from filamin (FLN) gene to glucose-6-phosphate dehydrogenase (G6PD) gene, complete cds
7680	20191	33080	3.29	6.0E-11	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
8305	20846	33769	3.25	6.0E-11	AV727859.1	EST_HUMAN	AV727859 HTC Homo sapiens cDNA clone HTCA08 5'
12	12691	25147	0.9	5.0E-11	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
3411	12691	25147	1.29	5.0E-11	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
4312	16898	28343	1.04	5.0E-11	P48034	SWISSPROT	ALDEHYDE OXIDASE
6639	19235	32037	3.02	5.0E-11	AL163213.2	NT	Homo sapiens chromosome 21 segment HS21C013
7537	20057	32931	12.3	5.0E-11	11416799	NT	Homo sapiens protocadherin beta 3 (PCDH83), mRNA
1446	14038		1.41	4.0E-11	AA436042.1	EST_HUMAN	zu01b12.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:730559 5'
2816	15368	27937	8.36	4.0E-11	BE885900.1	EST_HUMAN	601507531F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3609295 5'
2997	15613	28093	1.17	4.0E-11	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
4725	17306	28750	0.93	4.0E-11	D44666.1	EST_HUMAN	HUMSUPY069 Human brain cDNA Homo sapiens cDNA clone 069
6802	19199	32005	3.5	4.0E-11	P20065	SWISSPROT	PRE-MRNA SPLICING FACTOR RNA HELICASE PRP2

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7409	19834		4.06	4.0E-11	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
9316	21830		1.44	4.0E-11	BE149425.1	EST_HUMAN	RC1-HT0256-210100-013-108 HT0256 Homo sapiens cDNA
9580	22080	35045	0.91	4.0E-11	AI609753.1	EST_HUMAN	h82g12.x1 NCL_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:2105830 3' similar to WP:ZK353.1
12275	24478	30937	1.38	4.0E-11	11545732	NT	CE00385
1538	14130	26666	3.79	3.0E-11	6878077	NT	Homo sapiens SH3-domain binding protein 1 (SH3BP1), mRNA
4363	16950		1.47	3.0E-11	AA309248.1	EST_HUMAN	Mus musculus expressed in non-metastatic cells 2, protein (NM23B) (Nme2), mRNA
995	13807	28121	1.84	2.0E-11	AI150502.1	EST_HUMAN	EST180120 Liver, hepatocellular carcinoma Homo sapiens cDNA 5' end
1227	13826	26342	5.04	2.0E-11	R24807.1	EST_HUMAN	q38c04.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1752102 3' similar to contains MER10.13
1227	13828	26343	5.04	2.0E-11	R24807.1	EST_HUMAN	MER10 repetitive element
1659	14247	26780	6.04	2.0E-11	L17432.1	NT	Yg43e12.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:35144 5'
1655	14247	26781	6.04	2.0E-11	L17432.1	NT	Yg43e12.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:35144 5'
1659	14252	26786	1.09	2.0E-11	AI126371.1	EST_HUMAN	Gallus gallus rho-globin, beta-H globin, beta-A globin, epsilon-globin, and effector receptor-like protein, complete cds
3230	15842	28323	6.98	2.0E-11	P10263	SWISSPROT	COR3beta (COR3beta) genes, complete cds
3368	15976	28453	0.76	2.0E-11	AI478617.1	EST_HUMAN	Gallus gallus rho-globin, beta-H globin, beta-A globin, epsilon-globin, and effector receptor-like protein, complete cds
3409	16018	28497	0.65	2.0E-11	Q10473	SWISSPROT	COR3beta (COR3beta) genes, complete cds
3544	16148		1.01	2.0E-11	AF020503.1	NT	qc51c10.x1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:1713138 3' similar to gb.L02932 PEROXISOME PROLIFERATOR ACTIVATED RECEPTOR ALPHA (HUMAN); contains L1.11
4539	17123		0.89	2.0E-11	BE065537.1	EST_HUMAN	L1 repetitive element
4711	17283		0.65	2.0E-11	AL163227.2	NT	RETROVIRUS-RELATED GAG POLYPROTEIN (VERSION 1)
5070	17643		1.37	2.0E-11	BE062558.1	EST_HUMAN	tm54c09.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2161836 3'
6284	18892	31661	1.2	2.0E-11	AW877806.1	EST_HUMAN	POLYPEPTIDE N-ACETYL GALACTOSAMINYL TRANSFERASE (PROTEIN-UDP
6452	19053	31838	2.02	2.0E-11	AA581028.1	EST_HUMAN	ACETYL GALACTOSAMINYL TRANSFERASE (UDP-GALNAC:POLYPEPTIDE, N-ACETYL GALACTOSAMINYL TRANSFERASE) (GALNAC-T1)
7248	19775	32632	0.78	2.0E-11	BF502945.1	EST_HUMAN	Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHIT) gene, exon 5
7823	20365		0.86	2.0E-11	P37072	SWISSPROT	RC3-BT0316-170200-014-e05 BT0316 Homo sapiens cDNA
							Homo sapiens chromosome 21 segment HS21C027
							QV2-BT0258-281099-014-e01 BT0258 Homo sapiens cDNA
							QV2-PT0073-280300-109-H08 PT0073 Homo sapiens cDNA
							nc83n05.1 NCL_CGAP_GC1 Homo sapiens cDNA clone IMAGE:787433 5' similar to SW:PR16_YEAST
							P15938 PRE-MRNA SPLICING FACTOR RNA HELICASE PRP16
							7/97cd03.x1 NCL_CGAP_GC6 Homo sapiens cDNA clone IMAGE:3442565 3'
							OLFACTORY RECEPTOR-LIKE PROTEIN COR6

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9150	21685		1.27	2.0E-11	AF029308.1	NT	Homo sapiens chromosome 9 duplication of the T cell receptor beta locus and trypsinogen gene families
10184	22679	35671	4.6	2.0E-11	Q13606	SWISSPROT	OLFACTORY RECEPTOR 511 (OLFACTORY RECEPTOR-LIKE PROTEIN OLF1)
10409	22903	35699	0.79	2.0E-11	AW865874.1	EST_HUMAN	RC4-OT0072-170400-013-c11 OT0072 Homo sapiens cDNA
10409	22903	35900	0.79	2.0E-11	AW865874.1	EST_HUMAN	RC4-OT0072-170400-013-c11 OT0072 Homo sapiens cDNA
10992	23506	36538	2.41	2.0E-11	AA035369.1	EST_HUMAN	zk27g02.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:471794 3'
10992	23506	36539	2.41	2.0E-11	AA035369.1	EST_HUMAN	zk27g02.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:471794 3'
11805	25020		2.8	2.0E-11	AA704195.1	EST_HUMAN	zk27g03.s1 Soares_fetal_liver脾脏_S1 Homo sapiens cDNA clone IMAGE:460924 3'
11836	24200		2.49	2.0E-11	AW842143.1	EST_HUMAN	RC0-CN0027-210100-011-c01 CN0027 Homo sapiens cDNA
11860	24218	31043	2.25	2.0E-11	BF377859.1	EST_HUMAN	CM2-TN0140-070900-372-g01 TN0140 Homo sapiens cDNA
12135	24388		2.03	2.0E-11	D25217.2	NT	Homo sapiens mRNA for KIAA0027 protein, partial cds
12293	24492		5.24	2.0E-11	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
12626	24707		3.57	2.0E-11	11417966	NT	Homo sapiens SEC14 (S. cerevisiae)-like 2 (SEC14L2), mRNA
704	13325	25812	2.83	1.0E-11	AJ131016.1	NT	Homo sapiens SQL gene locus
816	13434	25939	0.84	1.0E-11	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
1259	13856	26372	2.96	1.0E-11	AL163279.2	NT	Homo sapiens chromosome 21 segment HS21C079
1546	14138		1.68	1.0E-11	AF119914.1	NT	Homo sapiens PRO3078 mRNA, complete cds
2171	14748	27317	2.61	1.0E-11	AF000573.1	NT	Homo sapiens homogenisat 1 2-4-oxylase gene, complete cds
3546	16150	28630	0.83	1.0E-11	BE004315.1	EST_HUMAN	CM0-BN0105-170300-292-d12 BN0105 Homo sapiens cDNA
4905	17480		0.97	1.0E-11	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
5535	18167	30581	15.03	1.0E-11	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
5997	18617	31353	0.8	1.0E-11	BF222646.1	EST_HUMAN	7p57d01.x1 NCL CGAP_P128 Homo sapiens cDNA clone IMAGE:3649945 3' similar to contains MER10.b3
8143	20684	33596	3.16	1.0E-11	4885546	NT	MER10 repetitive element
8517	21056	33979	4.69	1.0E-11	R13174.1	EST_HUMAN	Homo sapiens PHD finger protein 2 (PHF2) mRNA
8978	21516	34440	1.38	1.0E-11	BF365119.1	EST_HUMAN	Y73d08.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:28166 5'
8978	21516	34441	1.38	1.0E-11	BF365119.1	EST_HUMAN	QV4-NN1149-250900-423-a03 NN1149 Homo sapiens cDNA
11167	23674	36721	2.46	1.0E-11	BF680078.1	EST_HUMAN	QV4-NN1149-250900-423-a03 NN1149 Homo sapiens cDNA
2979	15595	28075	0.67	9.0E-12	P20742	SWISSPROT	602154807F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4295977 5'
9713	22211	35184	5.63	9.0E-12	AL163300.2	NT	PREGNANCY ZONE PROTEIN PRECURSOR
9713	22211	35185	5.63	9.0E-12	AL163300.2	NT	Homo sapiens chromosome 21 segment HS21C100
9261	21787		1	8.0E-12	BE074720.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C100
11911	24249		4.51	8.0E-12	AJ271736.1	NT	IL5-BT0578-100300-036-G12 BT0578 Homo sapiens cDNA
4766	17347	29786	1.68	7.0E-12	Q05904	SWISSPROT	Homo sapiens Xq pseudautosomal region, segment 2/2 34 KD SPICULE MATRIX PROTEIN PRECURSOR (LSM34)

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Table 4  
Single Exon Probes Expressed In Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1128	23759	36815	12.18	7.0E-12	AA704735.1	EST_HUMAN	2/23g01.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:451152 3'
3601	16205		0.72	6.0E-12	AV730554.1	EST_HUMAN	AV730554 HTF Homo sapiens cDNA clone HTFAWF06 5'
4440	17026	29466	10.25	6.0E-12	AA732516.1	EST_HUMAN	n288f11.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1302573 3' similar to contains Alu repetitive element;
8928	21484	34380	0.92	6.0E-12	AF003249.1	NT	Morone saxatilis myosin heavy chain FM3A (FM3A) mRNA, complete cds
9395	21818		1.8	6.0E-12	AA847898.1	EST_HUMAN	cd10g11.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1367588 similar to contains MER29.12
1081	13696	26198	2.85	5.0E-12	T06573.1	EST_HUMAN	MER29 repetitive element;
3437	16045	28528	1.19	5.0E-12	BE047778.1	EST_HUMAN	EST04482 Fetal brain, Striatum (cat#936206) Homo sapiens cDNA clone HFBDDV33
3780	16390	28855	6.69	5.0E-12	AJ271736.1	EST_HUMAN	tz42b05.yt NCI_CGAP_Brn52 Homo sapiens cDNA clone IMAGE:2291217 5'
6172	18784	31550	5.59	5.0E-12	AL163278.2	NT	Homo sapiens Xq pseudautosomal region, segment 2/2
6172	18784	31551	5.59	5.0E-12	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
6617	19214	32019	9.62	5.0E-12	AW974760.1	EST_HUMAN	EST366950 IMAGE resequences, MAGN Homo sapiens cDNA
7099	19448	32264	1.12	5.0E-12	AL040739.1	EST_HUMAN	DKFZP434B1615.s1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZP434B1615 3'
7108	19448	32284	1.14	5.0E-12	AL040739.1	EST_HUMAN	DKFZP434B1615.s1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZP434B1615 3'
8171	20712	33629	1.43	5.0E-12	AA033745.1	EST_HUMAN	z01g12.s1 Soares_fetal_heart_NbH19W Homo sapiens cDNA clone IMAGE:375718 3' similar to contains L1.13 L1 repetitive element;
8602	21141		0.7	5.0E-12	AW887037.1	EST_HUMAN	RC1-OT0086-220300-011-b07 OT0086 Homo sapiens cDNA
8925	21463		0.58	5.0E-12	AL079881.1	EST_HUMAN	DKFZP434J0426.r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZP434J0426 5'
9037	21574	34504	2.42	5.0E-12	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region, segment 1/2
9344	21858	34806	1.04	5.0E-12	P34982	SWISSPROT	OLFACTORY RECEPTOR 1D2 (OLFACTORY RECEPTOR-LIKE PROTEIN HGMP07E) (OLFACTORY RECEPTOR 17-4) (OR17-4)
10176	22671		4.17	5.0E-12	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
10266	22761	35748	0.67	5.0E-12	AL163302.2	NT	Homo sapiens chromosome 21 segment HS21C102
10461	22955	35966	2.12	5.0E-12	6978754	NT	Rattus norvegicus Deleted in colorectal cancer (rat homolog) (Dcc), mRNA
285	12923	25409	3.53	4.0E-12	AA700326.1	EST_HUMAN	z74g11.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:460878 3'
286	12923	25409	4.43	4.0E-12	AA700326.1	EST_HUMAN	z74g11.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:460878 3'
4727	17308	29752	0.82	4.0E-12	A1689984.1	EST_HUMAN	b2b05.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2270745 3' similar to TR:Q13539 Q13539 MARINER TRANSPOSASE;
7615	20128		0.7	4.0E-12	BF445140.1	EST_HUMAN	na21b03.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3366077 3' similar to contains MER7.b2
8185	20726		2.2	4.0E-12	AF109807.1	NT	Homo sapiens S164 gene, partial cds; PS1 and hypothetical protein genes, complete cds; and S171 gene, partial cds
8621	21180	34075	1.2	4.0E-12	AB042815.1	NT	Bos taurus Mth22 mRNA for mitochondrial carrier homolog 2, complete cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10961	23476	36501	4.25	4.0E-12	AJ229043.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 3/3
12180	24416		1.61	4.0E-12	U78027.1	NT	Homo sapiens Brubon's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3) genes, complete cds
644	13267	25744	2.73	3.0E-12	AW341683.1	EST_HUMAN	h13d01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2809377 3' similar to TR:O14517
644	13267	25745	2.73	3.0E-12	AW341683.1	EST_HUMAN	h13d01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2809377 3' similar to TR:O14517
5643	18272	30746	1.18	3.0E-12	AF111168.2	NT	O14517 SMRP.
8316	20857	33783	0.52	3.0E-12	O35453	SWISSPROT	Homo sapiens serine palmitoyl transferase, subunit II gene, complete cds, and unknown genes
9035	21572	34501	0.56	3.0E-12	O35453	SWISSPROT	SERINE PROTEASE HEPSIN
10535	23072	36085	3.26	3.0E-12	U37672.1	NT	SERINE PROTEASE HEPSIN
10535	23072	36086	3.26	3.0E-12	U37672.1	NT	Human prostate specific antigen gene, 5' flanking region
1693	14285	28820	1.05	2.0E-12	AW802131.1	EST_HUMAN	Human prostate specific antigen gene, 5' flanking region
3513	16118	28598	0.67	2.0E-12	6754495	NT	IL5-UM0071-120400-065-a05 UM0071 Homo sapiens cDNA
4192	16781	29229	0.9	2.0E-12	J01894.1	NT	Mus musculus keratin-associated protein 6.2 (Krtap6-2), mRNA
4192	16781	29230	0.9	2.0E-12	J01894.1	NT	Rat U3A small nuclear RNA
4512	17096		2.58	2.0E-12	BE063509.1	EST_HUMAN	Rat U3A small nuclear RNA
6603	19200		1.54	2.0E-12	AW971857.1	EST_HUMAN	CM0-BT0281-031199-087-a03 BT0281 Homo sapiens cDNA
7227	19758	32613	2.97	2.0E-12	T08169.1	EST_HUMAN	EST383946 IMAGE resequences, MAGL Homo sapiens cDNA
7382	19908	32773	1.21	2.0E-12	BE173035.1	EST_HUMAN	EST06060 Infant Brain, Berto Soares Homo sapiens cDNA clone HIBBA13 5' end
7656	20168	33055	2.38	2.0E-12	11422228	NT	MR0-HT0559-200400-015-a08 HT0559 Homo sapiens cDNA
7894	20436		0.6	2.0E-12	AV693827.1	EST_HUMAN	Homo sapiens Ac-like transposable element (ALTE), mRNA
9232	21954		2.18	2.0E-12	AF196864.1	NT	AV693827 GKG Homo sapiens cDNA clone GKGZF804 5'
9896	22393		11.42	2.0E-12	BE165980.1	EST_HUMAN	Homo sapiens putative BPES syndrome breakpoint region protein gene, complete cds
10408	22802	35898	0.69	2.0E-12	A1334130.1	EST_HUMAN	MR3-HT0487-150200-113-g01 HT0487 Homo sapiens cDNA
11820	24190		2.46	2.0E-12	AL163283.2	EST_HUMAN	qq0702.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1931835 3' similar to TR:Q13538
128	12796	25282	2.79	1.0E-12	AW627674.1	EST_HUMAN	Q13538 ORF2: FUNCTION UNKNOWN.
2031	14613		1.53	1.0E-12	A1871726.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C083
3106	15721	28191	1.33	1.0E-12	AF000991.1	NT	h190a09.x1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2870040 3' similar to contains MER18.11
3106	15721	28192	1.33	1.0E-12	AF000991.1	NT	MER18 repetitive element;
3943	16541	29007	38.65	1.0E-12	AU132248.1	EST_HUMAN	hm51107.x1 NCI_CGAP_U12 Homo sapiens cDNA clone IMAGE:2439493 3' similar to contains L1.b3 L1
							repetitive element;
							Homo sapiens testis-specific Testis Transcript Y 2 (TTY2) mRNA, partial cds
							Homo sapiens testis-specific Testis Transcript Y 2 (TTY2) mRNA, partial cds



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3943	16541	26008	36.65	1.0E-12	AU132248.1	EST_HUMAN	AU132248 NT2RP3 Homo sapiens cDNA clone NT2RP3004070 5'
6121	16736		1.85	1.0E-12	U82628.1	NT	Homo sapiens ataxia telangiectasia (ATM) gene, complete cds
6192	18802		1.95	1.0E-12	Q9Y2G7	SWISSPROT	HYPOTHETICAL ZINC FINGER PROTEIN KIAA0861
6653	19249	32051	0.7	1.0E-12	AF229843.1	NT	Mus musculus WNT-2 gene, partial cds; putative ankyrin-related protein and cystic fibrosis transmembrane conductance regulator (CFTR) genes, section 1 of 2 of the complete cds; and unknown gene
7170	19702	32549	1.74	1.0E-12	AF196864.1	NT	Homo sapiens putative BPES syndrome breakpoint region protein gene, complete cds
7204	19735	32587	9.7	1.0E-12	AI248533.1	EST_HUMAN	qh66a04.x1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1849614 3' similar to gb:M19503 LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (HUMAN); contains MER10.11 MER10 repetitive element
7204	19735	32588	9.7	1.0E-12	AI248533.1	EST_HUMAN	qh66a04.x1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1849614 3' similar to gb:M19503 LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (HUMAN); contains MER10.11 MER10 repetitive element
8428	20966	33880	0.54	1.0E-12	U66059.1	NT	Human germline T-cell receptor beta chain Dopamine-beta-hydroxylase-like, TRY1, TRY2, TRY3, TCRBV27S1P, TCRBV22S1A2N1T, TCRBV9S1A1T, TCRBV7S1A1N2T, TCRBV5S1A1T, TCRBV13S3, TCRBV6S7P, TCRBV7S3A2T, TCRBV13S2A1T, TCRBV9S2A2PT, TCRBV7S2A1N4T, TCRBV13S9/13S>
8639	21176	34098	1.18	1.0E-12	AA762323.1	EST_HUMAN	ac26d05.s1 Strategene ovary (H837217) Homo sapiens cDNA clone IMAGE:857577 3'
11723	24130	37154	4.65	1.0E-12	AW962164.1	EST_HUMAN	EST1374237 MAGE resequences, MAGG Homo sapiens cDNA
11941	24273		1.6	1.0E-12	AI739592.1	EST_HUMAN	wi33h08.x1 NCI_CGAP_Cot16 Homo sapiens cDNA clone IMAGE:2392095 3'
12097	24990		2.72	1.0E-12	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C068
12424	24609		2.02	1.0E-12	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
4019	16817	29092	0.91	9.0E-13	AB028900.1	NT	Homo sapiens CST gene for cerebroside sulfotransferase, exon 1, 2, 3, 4, 5
9519	22019		3.1	9.0E-13	N69653.1	EST_HUMAN	za26b06.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:283651 3'
746	13366	25860	4.58	8.0E-13	U29185.1	NT	Homo sapiens prion protein (PrP) gene, complete cds
746	13366	25861	4.58	8.0E-13	U29185.1	NT	Homo sapiens prion protein (PrP) gene, complete cds
1878	14464	27021	3.95	8.0E-13	U80017.1	NT	Homo sapiens basic transcription factor 2 p44 (btf2p44) gene, partial cds, neuronal apoptosis inhibitory protein (naip) and survival motor neuron protein (smn) genes, complete cds
8056	20598	33505	0.68	8.0E-13	AI884398.1	EST_HUMAN	wm31109.x1 NCI_CGAP_U14 Homo sapiens cDNA clone IMAGE:2437601 3'
8056	20598	33506	0.68	8.0E-13	AI884398.1	EST_HUMAN	wm31109.x1 NCI_CGAP_U14 Homo sapiens cDNA clone IMAGE:2437601 3'
10051	22546		2.58	8.0E-13	U78027.1	NT	Homo sapiens Bruton's tyrosine Kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3) genes, complete cds

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Table 4

Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11609	24052	37117	2.51	8.0E-13	U86060.1	NT	Human germline T-cell receptor beta chain TCRBV13S1, TCRBV6S8A2T, TCRBV5S6A3N2T, TCRBV13S6A2T, TCRBV6S9P, TCRBV5S3A2T, TCRBV13S8P, TCRBV6S3A1N1T, TCRBV4S2, TCRBV6S6A2T, TCRBV6S7P, TCRBV13S4, TCRBV6S2A1N1T, TCRBV5S4A2T, TCRBV6S4A1, TCRBV23S1A2T, TCRBV12>
8176	20717		0.63	7.0E-13	Q95155	SWISSPROT	OLFACTORY RECEPTOR-LIKE PROTEIN OLF2
12212	24435		37.61	7.0E-13	BE778223.1	EST_HUMAN	601463285F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3868613 5'
12448	24583		1.71	7.0E-13	Q10473	SWISSPROT	POLYPEPTIDE N-ACETYL GALACTOSAMINYL TRANSFERASE (PROTEIN-UDP ACETYL GALACTOSAMINYL TRANSFERASE) (UDP-GALNAc:POLYPEPTIDE, N-ACETYL GALACTOSAMINYL TRANSFERASE) (GALNAc-T1)
2149	14726	27299	6.02	6.0E-13	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
3364	15972		0.78	5.0E-13	R78338.1	EST_HUMAN	y8204.r1 Soares placenta NB2HP Homo sapiens cDNA clone IMAGE:145759 5'
3444	16052		1.64	5.0E-13	AA435773.1	EST_HUMAN	z177a12.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:728350 3' similar to contains Alu repetitive element, contains element MER22 repetitive element;
6958	19335	32359	0.88	5.0E-13	P08983	SWISSPROT	GAP JUNCTION BETA-1 PROTEIN (CONNEXIN 30) (CX30)
10739	23264	36279	2.49	5.0E-13	P07313	SWISSPROT	MYOSIN LIGHT CHAIN KINASE, SKELETAL MUSCLE (MLOCK)
1908	14493		3.69	4.0E-13	AW378614.1	EST_HUMAN	PM2-HT0224-221099-001-e11 HT0224 Homo sapiens cDNA
2500	15064		1.71	4.0E-13	AF003528.1	NT	Homo sapiens glycican 3 (GPC3) gene, partial cds and flanking repeat regions
4958	17436		1.03	4.0E-13	AA454054.1	EST_HUMAN	z49d07.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:795469 5'
5774	18399	31113	5.09	4.0E-13	BE169131.1	EST_HUMAN	PM3-HT0520-230200-002-c08 HT0520 Homo sapiens cDNA
7257	19785	32641	1.07	4.0E-13	AB037750.1	NT	Homo sapiens mRNA for KIAA1328 protein, partial cds
7607	20120	32997	0.81	4.0E-13	AA431529.1	EST_HUMAN	z478g12.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:782182 5' similar to TR:G452763
7705	20214		1.84	4.0E-13	N44291.1	EST_HUMAN	y33g05.r1 Soares melanocyte 2Nbhm Homo sapiens cDNA clone IMAGE:273080 5' similar to PIR:A32995
8775	21314	34236	0.94	4.0E-13	AL043810.1	EST_HUMAN	A32995 t complex sterility protein - mouse ; DKFZp434A0128 r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434A0128 5'
9933	22429	35403	4.28	4.0E-13	AI289831.1	EST_HUMAN	qn32d05.x1 NCI_CGAP_Kids Homo sapiens cDNA clone IMAGE:1899945 3' similar to contains Alu repetitive element;
11046	23559	36595	1.91	4.0E-13	AA435819.1	EST_HUMAN	z178g10.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:728514 3'
11046	23559	36596	1.91	4.0E-13	AA435819.1	EST_HUMAN	z178g10.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:728514 3'
192	12652		4.5	3.0E-13	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
898	13512		4.67	3.0E-13	AA430310.1	EST_HUMAN	z468g08.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:781406 5'
2408	14976	27550	1.06	3.0E-13	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region; segment 2/2
2519	15083		6.72	3.0E-13	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2687	15245	27812	2.75	3.0E-13	BF372662.1	EST_HUMAN	CM3-FT0100-140700-242-h08 FT0100 Homo sapiens cDNA
3221	15833		3.1	3.0E-13	AA745844.1	EST_HUMAN	ob18d02.s1 NCI_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1324035.3
3551	16155	28637	1.04	3.0E-13	P18616	SWISSPROT	DNA-DIRECTED RNA POLYMERASE II LARGEST SUBUNIT (VERSION 1)
3551	16155	28638	1.04	3.0E-13	P18616	SWISSPROT	DNA-DIRECTED RNA POLYMERASE II LARGEST SUBUNIT (VERSION 1)
5730	18358	31060	0.7	3.0E-13	AA134017.1	EST_HUMAN	zn88h10.r1 Stralagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:565315.5 similar to contains THR.12 THR repetitive element
5730	18358	31081	0.7	3.0E-13	AA134017.1	EST_HUMAN	zn88h10.r1 Stralagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:565315.5 similar to contains THR.12 THR repetitive element
6143	18757	31515	0.68	3.0E-13	AW005639.1	EST_HUMAN	w288c02.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2565890.3 similar to TR:O75139
7824	20368	33274	9.59	3.0E-13	U52111.2	NT	Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Ca2+/Calmodulin-dependent protein kinase I (CAMKI), creatine transporter (CRTR), CDM protein (CDM), adrenergic dystrophy protein >
8021	20583	33464	0.66	3.0E-13	AA352487.1	EST_HUMAN	EST60487 Activated T-cells XX Homo sapiens cDNA 5' and similar to similar to serine protease P100, Re-reactive factor
8021	20583	33465	0.66	3.0E-13	AA352487.1	EST_HUMAN	EST60487 Activated T-cells XX Homo sapiens cDNA 5' and similar to similar to serine protease P100, Re-reactive factor
10556	23092		4.07	3.0E-13	A084788.1	EST_HUMAN	HA0536 Human fetal liver cDNA library Homo sapiens cDNA
10924	23443	36464	2.91	3.0E-13	BE063509.1	EST_HUMAN	CMC-BT0281-031199-067-a03 B T0281 Homo sapiens cDNA
11469	23919	36988	2.49	3.0E-13	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
161	12824	25312	2.58	2.0E-13	U52111.2	NT	Homo sapiens X28 region near ALD locus containing dual specificity phosphatase 9 (DUSP9), ribosomal protein L18a (RPL18a), Ca2+/Calmodulin-dependent protein kinase I (CAMKI), creatine transporter (CRTR), CDM protein (CDM), adrenergic dystrophy protein >
260	12819	25406	2.22	2.0E-13	U23839.1	NT	Danio rerio fibroblast growth factor receptor 4 mRNA, complete cds
1313	13807	26427	8.84	2.0E-13	AF239710.1	NT	Homo sapiens DNA polymerase delta small subunit (POLD2) gene, exons 1 through 11 and complete cds
3038	15654	28133	0.58	2.0E-13	8924119	NT	Homo sapiens hypothetical protein PRO2130 (PRO2130), mRNA
3038	15654	28134	0.58	2.0E-13	8924119	NT	Homo sapiens hypothetical protein PRO2130 (PRO2130), mRNA
3320	15930	28407	1.2	2.0E-13	BF431899.1	EST_HUMAN	na67605.x1 Soares_NSF_FB_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE: 3'
3555	16159	28642	1.14	2.0E-13	AF109607.1	NT	Homo sapiens S164 gene, partial cds; PS1 and hypothetical protein genes, complete cds; and S171 gene, partial cds
4186	16776		1.9	2.0E-13	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
6271	18879	31647	5.27	2.0E-13	Q06852	SWISSPROT	CELL SURFACE GLYCOPROTEIN 1 PRECURSOR (OUTER LAYER PROTEIN B) (S-LAYER PROTEIN 1)

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6905	19839	32475	7.42	2.0E-13	X16912.1	NT	Human PFKL gene for liver-type 6-phosphofructokinase (EC 2.7.1.11) exon 2
10355	22849	35843	4.58	2.0E-13	5031886	NT	Homo sapiens mab-21 (C. elegans)-like 1 (MAB21L1) mRNA
11893	24236		20.31	2.0E-13	AW892155.1	EST_HUMAN	CMO-NN0001-100300-274-e11 NN0001 Homo sapiens cDNA
313	12967	25455	1.8	1.0E-13	S74129.1	NT	FGF-1-fibroblast growth factor 1 [human, kidney, Genomic, 342 nt, segment 2 of 2]
921	13534	26052	4.35	1.0E-13	AJ007973.1	NT	Homo sapiens LGMD2B gene
1381	13974	26502	1.01	1.0E-13	X87344.1	NT	H. sapiens DNA, DMB, HLA-Z1, IPP2, LMP2, TAP1, LMP7, TAP2, DOB, DOB2 and RING8, 9, 13 and 14 genes
2068	14648	27220	1.6	1.0E-13	AA720574.1	EST_HUMAN	nm21g02.s1 NCI_CGAP_GCB0 Homo sapiens cDNA clone IMAGE:1241138 3' similar to contains THR.L3
4116	16710		2.21	1.0E-13	AA324394.1	EST_HUMAN	EST27235 Cerabellum II Homo sapiens cDNA 5' end similar to EST containing L1 repeat
4896	17278	29724	1.51	1.0E-13	BF340987.1	EST_HUMAN	602038009F1 NCI_CGAP_Bm84 Homo sapiens cDNA clone IMAGE:4185866 5'
7851	20393	33296	0.77	1.0E-13	AA577812.1	EST_HUMAN	nm24401.s1 NCI_CGAP_Gas1 Homo sapiens cDNA clone IMAGE:1084801 3' similar to contains Alu repetitive element; contains element MER24 repetitive element;
7851	20393	33297	0.77	1.0E-13	AA577812.1	EST_HUMAN	nm24401.s1 NCI_CGAP_Gas1 Homo sapiens cDNA clone IMAGE:1084801 3' similar to contains Alu repetitive element; contains element MER24 repetitive element;
10002	22497		0.9	1.0E-13	O15481	SWISSPROT	MELANOMA-ASSOCIATED ANTIGEN B4 (MAGE-B4 ANTIGEN)
10202	22897	35691	0.52	1.0E-13	AF300701.1	NT	Mus musculus osteoblastic protein tyrosine phosphatase mRNA, complete cds
11256	23786	36842	15.07	1.0E-13	BF108755.1	EST_HUMAN	7145e10.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3524443 3' similar to contains MER29.b2 MER29 repetitive element;
11714	24124		1.87	1.0E-13	AV715377.1	EST_HUMAN	AV715377 DOB Homo sapiens cDNA clone DGBAIE03 5'
12393	24553		4.28	1.0E-13	AJ271795.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
355	13004	25488	4.61	9.0E-14	AA781159.1	EST_HUMAN	aj24c01.s1 Soares_testis_NHT Homo sapiens cDNA clone 1391232 3' similar to contains MER19.t1 MER19 repetitive element;
358	13005	25489	2.07	9.0E-14	AA781159.1	EST_HUMAN	aj24c01.s1 Soares_testis_NHT Homo sapiens cDNA clone 1391232 3' similar to contains MER19.t1 MER19 repetitive element;
2545	15109		3.84	9.0E-14	AW861577.1	EST_HUMAN	RC4-CT0322-080100-013-009 CT0322 Homo sapiens cDNA
2627	15189	27757	1.41	9.0E-14	AJ133127.1	NT	Homo sapiens mRNA for sodium-glucose cotransporter (SGLT2 gene)
2627	15189	27758	1.41	9.0E-14	AJ133127.1	NT	Homo sapiens mRNA for sodium-glucose cotransporter (SGLT2 gene)
2782	15335	27905	3.29	9.0E-14	AB038182.1	NT	Homo sapiens TFF gene cluster for trefoil factor, complete cds
3145	15759	28225	4.32	9.0E-14	AW513286.1	EST_HUMAN	xs54h05.x1 NCI_CGAP_Uti Homo sapiens cDNA clone IMAGE:2707833 3'
3275	13004	25488	0.71	9.0E-14	AA781159.1	EST_HUMAN	aj24c01.s1 Soares_testis_NHT Homo sapiens cDNA clone 1391232 3' similar to contains MER19.t1 MER19 repetitive element;
3866	16464	28928	7.24	9.0E-14	D14547.1	NT	Human DNA, SINE repetitive element
4870	17446	29897	1.77	9.0E-14	AJ002153.1	NT	Saguninus oedipus gene for seminal vesicle secreted protein sentenogelin I

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3545	16149		0.97	8.0E-14	BE488283.1	EST_HUMAN	h771c09.x1 NCI_CGAP_L024 Homo sapiens cDNA clone IMAGE:3213424 3'
4029	16627		3.29	8.0E-14	R76269.1	EST_HUMAN	y172e03.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:144796 3'
9369	20308	33211	36.57	8.0E-14	X89211.1	NT	H. sapiens DNA for endogenous retroviral like element
9479	21878	34825	4.61	8.0E-14	AA219316.1	EST_HUMAN	zq17c10.s1 Stratagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:828970 3'
11310	23803		4.45	8.0E-14	BE082558.1	EST_HUMAN	QV2-BT0259-261099-014-a01 BT0258 Homo sapiens cDNA
12108	24368	30972	2.07	8.0E-14	AI688118.1	EST_HUMAN	wc82h08.x1 NCI_CGAP_C03 Homo sapiens cDNA clone IMAGE:2326143 3'
1671	15447		2.78	7.0E-14	AW151673.1	EST_HUMAN	x67e10.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2623146 3' similar to contains MER10.12
8851	21390		0.54	7.0E-14	AL163285.2	NT	MER10 repetitive element ; Homo sapiens chromosome 21 segment HS21C085
390	13036	25525	14.21	6.0E-14	AF020503.1	NT	Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHIT) gene, exon 5
9738	22234	35212	3.27	6.0E-14	AF020503.1	NT	Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHIT) gene, exon 5
9738	22234	35213	3.27	6.0E-14	AF020503.1	NT	Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHIT) gene, exon 5
646	13269	25747	5.26	5.0E-14	Q63120	SWISSPROT	CANALICULAR MULTISPECIFIC ORGANIC ANION TRANSPORTER 1 (MULTIDRUG RESISTANCE-ASSOCIATED PROTEIN 2) (CANALICULAR MULTIDRUG RESISTANCE PROTEIN)
5209	17774	30187	1.53	5.0E-14	AW073791.1	EST_HUMAN	x603b05.x1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2575185 3' similar to contains L1.12 L1 repetitive element ;
5724	18350	31053	4.91	5.0E-14	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
1182	15434		1.61	4.0E-14	P04928	SWISSPROT	S-ANTIGEN PROTEIN PRECURSOR
1920	14505	27062	3.86	4.0E-14	AJ007973.1	NT	Homo sapiens LGMD2B gene
3816	18416		0.84	4.0E-14	AA046502.1	EST_HUMAN	zk67a06.r1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:487858 5'
4379	16966	29412	0.9	4.0E-14	N46328.1	EST_HUMAN	y173c12.s1 Soares_multiple_sclerosis_2NbHMS Homo sapiens cDNA clone IMAGE:279190 3' similar to contains L1.13 L1 repetitive element ;
7899	20441		0.49	4.0E-14	X87344.1	NT	H. sapiens DMA, DMB, HLA-Z1, IPP2, LMP2, TAP1, LMP7, TAP2, DOB, DOB2 and RING8, 9, 13 and 14 genes
11633	24073	37135	1.91	4.0E-14	P08548	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
12457	25107		4.37	4.0E-14	AI886224.1	EST_HUMAN	wm08c03.x1 NCI_CGAP_U14 Homo sapiens cDNA clone IMAGE:2435332 3' similar to contains Alu repetitive element ;
985	13597	26110	1.26	3.0E-14	X95466.1	NT	R. norvegicus mRNA for CPG2 protein
5059	17632	30075	0.74	3.0E-14	AW265354.1	EST_HUMAN	xp45112.x1 NCI_CGAP_HN11 Homo sapiens cDNA clone IMAGE:2743343 3' similar to contains Alu repetitive element ; contains element MER9 repetitive element ;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6832	19422	32237	1.08	3.0E-14	AI420786.1	EST_HUMAN	ta91g12.x1 NCI_CGAP_Pt28 Homo sapiens cDNA clone IMAGE:2094070 3' similar to TR:O00519 O00519
6832	19422	32238	1.08	3.0E-14	AI420786.1	EST_HUMAN	FATTY ACID AMIDE HYDROLASE. ;
8722	21261	34181	0.96	3.0E-14	N42165.1	EST_HUMAN	ta91g12.x1 NCI_CGAP_Pt28 Homo sapiens cDNA clone IMAGE:2094070 3' similar to TR:O00519 O00519
10872	23393	36408	2.75	3.0E-14	BE888016.1	EST_HUMAN	FATTY ACID AMIDE HYDROLASE. ;
11116	17632	30075	9.84	3.0E-14	AW265354.1	EST_HUMAN	yy07b10.t1 Soares melanocyte 2N6HM Homo sapiens cDNA clone IMAGE:270523 5'
12369	24984		1.64	3.0E-14	AL163285.2	NT	601511530f1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913087 5'
413	13048	25539	2.51	2.0E-14	AJ271736.1	NT	xp45f12.x1 NCI_CGAP_HN11 Homo sapiens cDNA clone IMAGE:2743343 3' similar to contains Alu repetitive element; contains element MER9 repetitive element ;
413	13048	25540	2.51	2.0E-14	AJ271736.1	NT	Homo sapiens chromosome 21 segment HS21C085
719	15422	25828	9.8	2.0E-14	AL163303.2	NT	Homo sapiens Xq pseudautosomal region, segment 2/2
2431	14998		1.48	2.0E-14	AW372868.1	EST_HUMAN	Homo sapiens Xq pseudautosomal region, segment 2/2
2504	15068		1.07	2.0E-14	7657529	NT	Homo sapiens chromosome 21 segment HS21C103
2567	15131	27699	1.03	2.0E-14	AL163209.2	NT	RC5-BT0377-091289-031-D12 BT0377 Homo sapiens cDNA
2699	15256		0.98	2.0E-14	P08548	SWISSPROT	Homo sapiens rhabdoid tumor deletion region protein 1 (RTDR1), mRNA
5715	18341	30847	0.95	2.0E-14	BF380661.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C009
5804	18429	31148	0.8	2.0E-14	AI312351.1	EST_HUMAN	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
5895	18517	31242	2.86	2.0E-14	U01317.1	NT	IL2-UT0072-240800-142-D07 UT0072 Homo sapiens cDNA
6963	19540		0.98	2.0E-14	BE000550.1	EST_HUMAN	ta78h01.x2 NCI_CGAP_HSC2 Homo sapiens cDNA clone IMAGE:2050225 3' similar to contains L1.13 L1 repetitive element ;
7329	19856	32719	1.12	2.0E-14	P56163	SWISSPROT	Human beta globin region on chromosome 11
7518	20038	32906	20.34	2.0E-14	BE158761.1	EST_HUMAN	RC3-BN0072-240200-011-a06 BN0072 Homo sapiens cDNA
7518	20038	32907	20.34	2.0E-14	BE158761.1	EST_HUMAN	ZINC-FINGER PROTEIN NEURO-D4
9831	22329	35311	0.54	2.0E-14	AI978795.1	EST_HUMAN	IL2-HT0397-071299-024-D04 HT0397 Homo sapiens cDNA
10659	23191	36206	4.65	2.0E-14	AW139800.1	EST_HUMAN	wr56g10.x1 NCI_CGAP_U11 Homo sapiens cDNA clone IMAGE:2492034 3' similar to contains Alu repetitive element;
12366	24968		3.3	2.0E-14	AF008191.1	NT	UI-H-B11-advw-a-10-0-UI.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2718234 3'
12617	15088		1.99	2.0E-14	7657529	NT	Homo sapiens putative G6 protein (GR6) gene, complete cds
1105	13709	26218	1.89	1.0E-14	AL163246.2	NT	Homo sapiens rhabdoid tumor deletion region protein 1 (RTDR1), mRNA
1452	14044	26572	6.89	1.0E-14	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C046
1452	14044	26573	6.89	1.0E-14	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C068
2044	14626	27195	7.63	1.0E-14	L44140.1	NT	Homo sapiens chromosome 21 segment HS21C068 (G8FD) gene, complete cds

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2228	14803	27374	5.33	1.0E-14	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
2453	15020	27591	5.89	1.0E-14	AF001089.1	NT	Homo sapiens ribosomal protein L23A (RPL23A) gene, complete cds
2971	15587	28069	1.51	1.0E-14	P05227	SWISSPROT	HISTIDINE-RICH PROTEIN PRECURSOR (CLONE PFHRP-II)
3203	15815	28290	3.91	1.0E-14	BF335227.1	EST_HUMAN	RC2-CT0432-310700-013-a09_1 CT0432 Homo sapiens cDNA
3203	15815	28291	3.91	1.0E-14	BF335227.1	EST_HUMAN	RC2-CT0432-310700-013-a09_1 CT0432 Homo sapiens cDNA
3955	16553	29022	2.1	1.0E-14	AA882984.1	EST_HUMAN	ee89c12.s1 Stragene schizop brain S11 Homo sapiens cDNA clone IMAGE:971350 3'
4572	17155	29599	1.71	1.0E-14	AW275852.1	EST_HUMAN	xq39h10.x1 NCI_CGAP_Lu28 Homo sapiens cDNA clone IMAGE:2753059 3'
5977	18597	31332	2.03	1.0E-14	AF128145.1	NT	Bos taurus xenobiotic/medium-chain fatty acid:CoA ligase form XL-III mRNA, nuclear mRNA encoding mitochondrial protein, complete cds
6778	24770	32183	12	1.0E-14	11437150	NT	Homo sapiens prominin (mouse)-like 1 (PROML1), mRNA
6778	24770	32184	12	1.0E-14	11437150	NT	Homo sapiens prominin (mouse)-like 1 (PROML1), mRNA
1620	14213	26744	1.19	9.0E-15	7427522	NT	Homo sapiens protein tyrosine phosphatase, receptor type, T (PTPR-T), mRNA
2217	14792						Homo sapiens transcription factor IGHM enhancer 3, JM11 protein, JM5 protein, T54 protein, JM10 protein, A4 differentiation-dependent protein, triple LIM domain protein 6, and synaptophysin genes, complete cds; and L-type calcium channel $\alpha 2$
7507	20029	32892	1.39	9.0E-15	AF196779.1	NT	GAG POLYPROTEIN[CONTAINS: CORE PROTEINS P15, P12, P30, P10]
7959	20501	33410	1.38	9.0E-15	BE903559.1	EST_HUMAN	60167750F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3960158 5'
12590	24690		1.76	9.0E-15	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
2837	13138		1.17	8.0E-15	BE261482.1	EST_HUMAN	601148632F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3164023 5'
7233	19763	32619	1.29	7.0E-15	BF035327.1	EST_HUMAN	601458531F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862086 5'
10331	22825		2.53	7.0E-15	AW241958.1	EST_HUMAN	xn77d02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2700483 3' similar to contains THR12 THR repetitive element
11776	24184		1.76	7.0E-15	AA284465.1	EST_HUMAN	zs57d08.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:701583 5' similar to gb:L21834 STEROL O-ACYLTRANSFERASE (HUMAN); contains L1.11 L1 repetitive element
1031	13641	26156	6.29	6.0E-15	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region, segment 2/2
6077	18694	31440	1.18	6.0E-15	X73462.1	NT	O. aries mRNA for hair keratin cysteine-rich protein
6077	18694	31441	1.18	6.0E-15	X73462.1	NT	O. aries mRNA for hair keratin cysteine-rich protein
11182	25128		1.86	6.0E-15	AW836843.1	EST_HUMAN	QV1-L.T0036-150200-070-c10 L.T0036 Homo sapiens cDNA
12848	24722		1.3	6.0E-15	BF432200.1	EST_HUMAN	na81c12.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE: 3'
435	13088	25563	5.19	5.0E-15	AL163208.2	NT	Homo sapiens chromosome 21 segment HS21C008
2789	15342	27912	2.35	5.0E-15	U91328.1	NT	Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (HLA-H) gene, RoRet gene, and sodium phosphate transporter (NPT3) gene, complete cds
3515	16120		1.06	5.0E-15	AW296817.1	EST_HUMAN	UI-H-BW0-g-10-Q-UI.s1 NCI_CGAP_Sub6 Homo sapiens cDNA clone IMAGE:2731219 3'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5299	17861		1.28	5.0E-15	P11369	SWISSPROT	RETROVIRUS-RELATED POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ; ENDONUCLEASE]
10555	23091		2.72	5.0E-15	AV730056.1	EST_HUMAN	AV730056 HTF Homo sapiens cDNA clone HTFAVE08 5'
452	12681	25137	2.33	4.0E-15	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
6771	19364	32173	0.79	4.0E-15	AB007970.1	NT	Homo sapiens mRNA, chromosome 1 specific transcript KIAA0501
10940	20287	33184	2.54	4.0E-15	AJ130894.1	NT	Homo sapiens mRNA for transcription factor
10940	20287	33185	2.54	4.0E-15	AJ130894.1	NT	Homo sapiens mRNA for transcription factor
4297	16883		7.28	3.0E-15	N88452.1	EST_HUMAN	LY1142F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone LY1142 5' similar to ANF(CARDIODILATIN)
5060	17633		0.57	3.0E-15	P92485	SWISSPROT	NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 5
5179	17748	30175	0.72	3.0E-15	AA078097.1	EST_HUMAN	7P01F03 Chromosome 7 Placental cDNA Library Homo sapiens cDNA clone 7P01F03
5179	17748	30176	0.72	3.0E-15	AA078097.1	EST_HUMAN	7P01F03 Chromosome 7 Placental cDNA Library Homo sapiens cDNA clone 7P01F03
6904	19638		1.41	3.0E-15	Q84625	SWISSPROT	GLUTATHIONE PEROXIDASE RY2D1 PRECURSOR (ODORANT-METABOLIZING PROTEIN RY2D1)
7323	19850	32711	3.48	3.0E-15	M27685.1	NT	Mus musculus ultra high sulfur keratin gene, complete cds
7323	19850	32712	3.48	3.0E-15	M27685.1	NT	Mus musculus ultra high sulfur keratin gene, complete cds
9839	22337		2.32	3.0E-15	AA807128.1	EST_HUMAN	oc36a07 s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1351764 3' similar to contains MER19.11 MER19 repetitive element ;
10673	23205	36218	3.36	3.0E-15	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
12114	24997		1.36	3.0E-15	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
271	12928	25415	4.1	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
391	13037	25526	3.78	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
391	13037	25527	3.78	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
2410	14978	27552	1.44	2.0E-15	BE350127.1	EST_HUMAN	h09g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.b3 MER29 repetitive element ;
2410	14978	27553	1.44	2.0E-15	BE350127.1	EST_HUMAN	h09g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.b3 MER29 repetitive element ;
3559	16163	28645	0.73	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
3559	16163	28646	0.73	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced



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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4142	16734	28188	0.95	2.0E-15	AW238498.1	EST_HUMAN	xp26h01.x1 NCI_CGAP_HN10 Homo sapiens cDNA clone IMAGE:2741521 3' similar to contains L1.13 L1 repetitive element ;
4728	17310		2.72	2.0E-15	A1808335.1	EST_HUMAN	wf07f06.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2348923 3' similar to TR:Q81043
5332	17893	30308	0.93	2.0E-15	P13993	SWISSPROT	Q61043 NINEIN ;
5332	17893	30307	0.93	2.0E-15	P13993	SWISSPROT	REPETITIVE PROLINE-RICH CELL WALL PROTEIN 2 PRECURSOR
6329	18935	31711	1.02	2.0E-15	BE562352.1	EST_HUMAN	REPETITIVE PROLINE-RICH CELL WALL PROTEIN 2 PRECURSOR
6329	18935	31712	1.02	2.0E-15	BE562352.1	EST_HUMAN	601344253F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3877288 5'
							601344253F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3877288 5'
7168	18700		1.37	2.0E-15	AJ400877.1	NT	Homo sapiens ASCL3 gene, CEGP1 gene, C11orf14 gene, C11orf15 gene, C11orf18 gene and C11orf17 gene
7315	18842	32703	2.51	2.0E-15	AA704195.1	EST_HUMAN	z77f603.s1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:460924 3'
7427	19951	32818	4.49	2.0E-15	W05064.1	EST_HUMAN	z78d10.r1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:298875 5' similar to WP:F44F4.8 CE02227 TRANSPOSASE ;
8837	21378	34300	2.62	2.0E-15	D14547.1	NT	Human DNA, SINE repetitive element
9002	21538	34468	0.87	2.0E-15	AA397758.1	EST_HUMAN	z77g08.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:728414 5'
9002	21539	34469	0.87	2.0E-15	AA397758.1	EST_HUMAN	z77g08.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:728414 5'
9325	21839	34780	1.13	2.0E-15	AW379465.1	EST_HUMAN	CM0-HT0244-201089-078-a12 HT0244 Homo sapiens cDNA
9325	21839	34791	1.13	2.0E-15	AW379465.1	EST_HUMAN	CM0-HT0244-201089-078-a12 HT0244 Homo sapiens cDNA
10718	23246		3.59	2.0E-15	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region, segment 1/2
12487	16163	28645	2.97	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
12487	16163	28646	2.97	2.0E-15	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
2803	15355		2.08	1.0E-15	A1689984.1	EST_HUMAN	b28h05.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2270745 3' similar to TR:Q13539 Q13539 MARINER TRANSPOSASE ;
3046	15682	28143	1.24	1.0E-15	BE043584.1	EST_HUMAN	ik40e02.y1 NCI_CGAP_Ov34 Homo sapiens cDNA clone IMAGE:2999182 5'
3176	15789	28261	1.05	1.0E-15	P08547	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
6510	19110	31896	1.71	1.0E-15	T95763.1	EST_HUMAN	ye40e10.s1 Soares_fetal_liver_spleen_INFLS Homo sapiens cDNA clone IMAGE:120234 3' similar to contains MER6 repetitive element ;
7080	19652		1.91	1.0E-15	BE074217.1	EST_HUMAN	QY3-BT0569-270100-074-g05 BT0569 Homo sapiens cDNA
7105	19445	32262	0.77	1.0E-15	P39057	SWISSPROT	DYNEIN BETA CHAIN, CLARY
8174	20715	33631	0.89	1.0E-15	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
8359	20899	33819	4.97	1.0E-15	A1200976.1	EST_HUMAN	qf68h06.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1755227 3'
8359	20899	33820	4.97	1.0E-15	A1200976.1	EST_HUMAN	qf68h06.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1755227 3'

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8969	21507	34428	0.51	1.0E-15	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
8972	21510	34432	1.99	1.0E-15	4507208	NT	Homo sapiens spermidine synthase (SRM) mRNA
9171	21748	34691	0.87	1.0E-15	Q39575	SWISSPROT	DYNEIN GAMMA CHAIN, FLAGELLAR OUTER ARM
9550	22050	35012	1.18	1.0E-15	AA864653.1	EST_HUMAN	ch37c03.s1 NCI CGAP_Kid6 Homo sapiens cDNA clone IMAGE:1459972 3' similar to contains L1.13 L1 repetitive element;
10698	23228	36242	6.86	1.0E-15	AF044083.1	NT	Homo sapiens major histocompatibility locus class III region
12564	24820	30792	9.35	1.0E-15	AI783944.1	EST_HUMAN	tr31c05.x1 NCI CGAP_Ov23 Homo sapiens cDNA clone IMAGE:2219912 3' similar to contains Alu repetitive element;
4417	17002		0.63	9.0E-16	BF689487.1	EST_HUMAN	602120192F1 NIH MGC_58 Homo sapiens cDNA clone IMAGE:4277422 5'
4602	17185	29832	1.11	9.0E-16	4503188	NT	Homo sapiens cut (Drosophila)-like 1 (CCAA1 displacement protein) (GUTL1) mRNA
10873	23394	36409	2.66	9.0E-16	F08888.1	EST_HUMAN	HSC23F051 normalized infant brain cDNA Homo sapiens cDNA clone c-23f05
5880	18502	31228	0.73	7.0E-16	4885120	NT	Homo sapiens chondroline (C-C motif) receptor 8 (CCR8) mRNA
7379	19905	32769	1.36	7.0E-16	O88807	SWISSPROT	PROTEIN-ARGININE DEIMINASE TYPE IV (PEPTIDYLARGININE DEIMINASE IV) (PAD-R4)
7379	19905	32770	1.36	7.0E-16	O88807	SWISSPROT	(PEPTIDYLARGININE DEIMINASE TYPE ALPHA)
12509	24916		33.75	7.0E-16	T04149.1	EST_HUMAN	PROTEIN-ARGININE DEIMINASE TYPE IV (PEPTIDYLARGININE DEIMINASE IV) (PAD-R4)
2186	14762		29.26	6.0E-16	AW972611.1	EST_HUMAN	EST384702 IMAGE resequences, MAGL Homo sapiens cDNA
5436	17991	30397	0.94	6.0E-16	BF365702.1	EST_HUMAN	QV2-NT0048-160800-310-d12 NT0048 Homo sapiens cDNA
1539	14131	26687	1.21	5.0E-16	AJ251154.1	NT	Mus musculus olfactory receptor cluster, OR37A, OR37B, OR37C, OR37E genes and OR37D pseudogene
2705	15262	27829	2.6	5.0E-16	AA992176.1	EST_HUMAN	af80c04.s1 Soares_tota_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:1623078 3' similar to contains element L1 repetitive element;
11396	23848	36914	3.76	5.0E-16	BF217388.1	EST_HUMAN	601885734F1 NIH MGC_57 Homo sapiens cDNA clone IMAGE:4104129 5'
12606	24690		4.96	5.0E-16	11418127	NT	Homo sapiens GTP binding protein 1 (GTPBP1), mRNA
2281	14855		1.23	4.0E-16	AB001523.1	NT	Homo sapiens gene for TMEI1 and PWP2, complete and partial cds
2419	14987	27561	1.68	4.0E-16	AW797168.1	EST_HUMAN	QV1-UM0036-200300-115-g02 UM0036 Homo sapiens cDNA
2419	14987	27562	1.68	4.0E-16	AW797168.1	EST_HUMAN	QV1-UM0036-200300-115-g02 UM0036 Homo sapiens cDNA
3503	16108	28584	6.73	4.0E-16	Q16653	SWISSPROT	MYELIN-OLIGODENDROCYTE GLYCOPROTEIN PRECURSOR
4223	16811	29258	4.28	4.0E-16	BE083875.1	EST_HUMAN	PM4-BT0650-010400-002-g09 BT0650 Homo sapiens cDNA
4223	16811	29259	4.28	4.0E-16	BE083875.1	EST_HUMAN	PM4-BT0650-010400-002-g09 BT0650 Homo sapiens cDNA
7698	20207	33094	37.48	4.0E-16	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
9219	21736	34678	1.44	4.0E-16	11423191	NT	Homo sapiens hypothetical protein FLJ10024 (FLJ10024), mRNA
11098	23608	36648	1.68	4.0E-16	AV730030.1	EST_HUMAN	AV730030 HTF Homo sapiens cDNA clone HTFAWA03 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11800	24180		1.34	4.0E-16	P08548	SWISSPROT	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
11887	24232		13.76	4.0E-16	C05947.1	EST_HUMAN	C05947 Human pancreatic islet Homo sapiens cDNA clone hbc5355
11897	24239	31006	2.91	4.0E-16	6912459	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
12178	24414		1.8	4.0E-16	R18591.1	EST_HUMAN	Y86611.11 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:30489 5'
138	12803	25292	0.93	3.0E-16	AW022862.1	EST_HUMAN	df45c01.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2486378 5'
138	12803	25293	0.93	3.0E-16	AW022862.1	EST_HUMAN	df45c01.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2486378 5'
481	13124		1.24	3.0E-16	AL048445.1	EST_HUMAN	DKFZ434P037_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434P037 5'
501	13133		2.35	3.0E-16	AF135446.1	NT	Homo sapiens TSX (TSX) pseudogene, exon 5
1501	14093	26632	1.81	3.0E-16	Q28983	SWISSPROT	ZONADHESIN PRECURSOR
3004	15620	28097	4.2	3.0E-16	P03200	SWISSPROT	ENVELOPE GLYCOPROTEIN GP340 (MEMBRANE ANTIGEN) (MA) [CONTAINS: GLYCOPROTEIN GP220]
4007	16605	29079	0.61	3.0E-16	T08169.1	EST_HUMAN	EST060600 Infant Brain, Bento Soares Homo sapiens cDNA clone HIBBA13 5' end
4031	16626		1.07	3.0E-16	U03887.1	NT	Human BXP20 gene
4689	17271	29720	0.97	3.0E-16	AW160828.1	EST_HUMAN	au76b06.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782163 5' similar to SW:KID1 MOUSE Q81751 RENAL TRANSCRIPTION FACTOR KID-1;
5077	17850	30091	1.14	3.0E-16	AV661393.1	EST_HUMAN	AV661393 GLC Homo sapiens cDNA clone GLCGSA01 3'
5482	18116		0.9	3.0E-16	AA077225.1	EST_HUMAN	7B10F02 Chromosome 7 Fetal Brain cDNA Library Homo sapiens cDNA clone 7B10F02
5801	18426	31144	1.57	3.0E-16	AF003529.1	NT	Homo sapiens glypican 3 (GPC3) gene, partial cds and flanking repeat regions
8592	21131	34047	4.08	3.0E-16	AI002836.1	EST_HUMAN	am98h05.s1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:1684185 3' similar to contains THR.b2 THR repetitive element;
9805	22303		0.84	3.0E-16	BF690817.1	EST_HUMAN	602246538F1 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:4332032 5'
10027	22522	35516	5.15	3.0E-16	L78810.1	NT	Homo sapiens ADP/ATP carrier protein (ANT-2) gene, complete cds
12637	25078	30516	9.33	3.0E-16	AL043288.2	EST_HUMAN	DKFZp434L1623_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434L1623 5'
1007	13618		1.38	2.0E-16	AL163279.2	NT	Homo sapiens chromosome 21 segment HS21C079
2428	14896		1.01	2.0E-16	AA621761.1	EST_HUMAN	af06d04.s1 Soares testis, NHT Homo sapiens cDNA clone IMAGE:1030855 3'
2713	15270		1.53	2.0E-16	J03081.1	NT	Human SSV-related endogenous retroviral LTR-like element
4257	16843	26292	1.34	2.0E-16	X89211.1	NT	H. sapiens DNA for endogenous retroviral like element
5370	17830	30344	0.57	2.0E-16	BE061178.1	EST_HUMAN	RC3-BT0046-131189-003-H12 BT0046 Homo sapiens cDNA
6839	19429	32245	0.89	2.0E-16	Q31125	SWISSPROT	HISTIDINE-RICH PROTEIN KE4
7701	20210	33097	0.76	2.0E-16	AI470723.1	EST_HUMAN	ti16e11.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2141708 3' similar to contains element MER33 repetitive element;
7908	20450	33357	1.81	2.0E-16	AI732837.1	EST_HUMAN	nz47706.x5 NCI_CGAP_P12 Homo sapiens cDNA clone IMAGE:1280947 similar to TR:Q54849 O54849 HYPOTHETICAL 42.9 KD PROTEIN. [2] TR:Q08905 contains MER7.11 MER7 repetitive element;

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8099	20640	33551	0.7	2.0E-16	BE858026.1	EST_HUMAN	782h09.x1 NCI CGAP Pr28 Homo sapiens cDNA clone IMAGE:3303521 3'
8099	20640	33552	0.7	2.0E-16	BE858026.1	EST_HUMAN	782h09.x1 NCI CGAP Pr28 Homo sapiens cDNA clone IMAGE:3303521 3'
8484	21004	33921	0.6	2.0E-16	AW877214.1	EST_HUMAN	CM4-PT0034-180200-506-a01 PT0034 Homo sapiens cDNA
8464	21004	33922	0.6	2.0E-16	AW877214.1	EST_HUMAN	CM4-PT0034-180200-506-a01 PT0034 Homo sapiens cDNA
10808	23331	36343	2.71	2.0E-16	5802145	NT	Homo sapiens ubiquitin carrier protein E2-C (UBCH10), mRNA
197	12857	25339	2.56	1.0E-16	AF200719.1	NT	Homo sapiens pituitary tumor transforming gene protein (PTTG) gene, complete cds
405	13080		29.83	1.0E-16	AA628592.1	EST_HUMAN	af39g11.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:1034084 3' similar to contains OFR 12 OFR repetitive element
2014	14596	27159	1.78	1.0E-16	BF327942.1	EST_HUMAN	QV0-BN0148-070700-293-a10 BN0148 Homo sapiens cDNA
5896	18518	31243	0.85	1.0E-16	AF163864.1	NT	Homo sapiens SNCA isoform (SNCA) gene, complete cds, alternatively spliced
5665	19163		27.66	1.0E-16	U45983.1	NT	Homo sapiens CCR8 chemokine receptor (CMKBR8) gene, complete cds
6688	19284	32087	2.77	1.0E-16	Q02779	SWISSPROT	MITOGEN-ACTIVATED PROTEIN KINASE KINASE 10 (MIXED LINEAGE KINASE 2) (PROTEIN KINASE MST)
7556	19163		6.98	1.0E-16	U45983.1	NT	Homo sapiens CCR8 chemokine receptor (CMKBR8) gene, complete cds
9207	21724	34667	1.15	1.0E-16	AW875661.1	EST_HUMAN	QV2-PT0012-040400-124-a05 PT0012 Homo sapiens cDNA
3802	18402	28866	2.48	9.0E-17	AW900048.1	EST_HUMAN	CM1-NN1003-200300-153-a01 NN1003 Homo sapiens cDNA
6824	18414		1.94	9.0E-17	AJ392964.1	EST_HUMAN	tg22c11.x1 NCI CGAP CLL1 Homo sapiens cDNA clone IMAGE:2108524 3' similar to contains MER28 12 MER28 repetitive element
8052	20594		4.65	9.0E-17	AW150257.1	EST_HUMAN	xg49g12.x1 NCI CGAP_U11 Homo sapiens cDNA clone IMAGE:2630950 3' similar to contains OFR 12 OFR repetitive element
10124	22819		2.1	9.0E-17	AF200719.1	NT	Homo sapiens pituitary tumor transforming gene protein (PTTG) gene, complete cds
1056	13661		1.59	8.0E-17	AW880701.1	EST_HUMAN	QV0-O10032-080300-155-a01 OT0032 Homo sapiens cDNA
3961	16559		0.7	8.0E-17	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
5771	24748	31111	3.55	8.0E-17	BE172081.1	EST_HUMAN	MRO-HT0559-060300-003-a04 HT0559 Homo sapiens cDNA
7319	19846		1.82	8.0E-17	AV730759.1	EST_HUMAN	AV730759 HTF Homo sapiens cDNA clone HTFAGB07 5'
1505	14097		3.4	7.0E-17	8753097	NT	Mus musculus apolipoprotein B editing complex 2 (ApoBec2), mRNA
5526	18158		2.97	7.0E-17	AF216850.1	NT	Homo sapiens putative MTAP (MTAP) mRNA, partial cds, alternatively spliced
6789	18390	32186	7.15	7.0E-17	AF229843.1	NT	Mus musculus WNT-2 gene, partial cds; putative ankyrin-related protein and cystic fibrosis transmembrane conductance regulator (CFTR) genes, section 1 of 2 of the complete cds; and unknown gene
217	12878	25365	7.43	6.0E-17	AW983880.1	EST_HUMAN	RC1-HN0003-220300-021-b04 HN0003 Homo sapiens cDNA
6455	19056	31841	1.68	6.0E-17	AW662772.1	EST_HUMAN	h181404.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2978695 3' similar to contains L1.12 L1 repetitive element
10192	22887	35680	0.52	6.0E-17	P20138	SWISSPROT	MYELOID CELL SURFACE ANTIGEN CD33 PRECURSOR (GP67)

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
446	12875	25131	2.78	5.0E-17	T84110.1	EST_HUMAN	yc05h08.t1 Stratagene lung (#837210) Homo sapiens cDNA clone IMAGE:78839 5'
7588	20101	32976	1.82	5.0E-17	T81043.1	EST_HUMAN	y226b04.t1 Soares fetal liver spleen 1NLS Homo sapiens cDNA clone IMAGE:109327 5'
9284	21884	34829	1.12	4.0E-17	AW129165.1	EST_HUMAN	xt20e04.x1 NCI_CGAP_Kid8 Homo sapiens cDNA clone IMAGE:2618622 3' similar to contains Alu repetitive element; contains MER19.b1 MER19 repetitive element ;
11365	23817	36878	2.17	4.0E-17	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
11816	24188		2.36	4.0E-17	A1073546.1	EST_HUMAN	ov45e04.x1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1840286 3' similar to TR:Q16530
1540	14132		1.03	3.0E-17	D14547.1	NT	Q16530 PMS3 mRNA, contains MER10.12 MER10 repetitive element ;
2146	14723	27295	1.28	3.0E-17	AW119123.1	EST_HUMAN	Human DNA, SINE repetitive element
3227	15839		1.41	3.0E-17	P35410	SWISSPROT	xd89c09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2604784 3'
3704	16305	28773	1.24	3.0E-17	BE328522.1	EST_HUMAN	MAS-RELATED G PROTEIN-COUPLED RECEPTOR MRG
3704	16305	28774	1.24	3.0E-17	BE328522.1	EST_HUMAN	hw05b04.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3181899 3'
5181	17747		1.02	3.0E-17	BF511266.1	EST_HUMAN	hw05b04.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3181899 3'
8212	20753	33667	1.09	3.0E-17	N68451.1	EST_HUMAN	UI-H-B14-adj-c-08-c-UI.at1 NCI_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3085043 3'
9618	22118	36081	4.54	3.0E-17	AB026898.1	NT	za14b02.s1 Soares fetal liver spleen 1NLS Homo sapiens cDNA clone IMAGE:292491 3' similar to contains PTR5.13 PTR5 repetitive element ;
10282	22777	35767	0.65	3.0E-17	BF327012.1	EST_HUMAN	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
10282	22777	35768	0.65	3.0E-17	BF327012.1	EST_HUMAN	QV3-BN0047-270700-283-at12 BN0047 Homo sapiens cDNA
11775	24163		3.77	3.0E-17	11417866	NT	QV3-BN0047-270700-283-at12 BN0047 Homo sapiens cDNA
375	13024	25510	3.38	2.0E-17	A1270080.1	EST_HUMAN	Homo sapiens SEC14 (S. cerevisiae) like 2 (SEC14L2), mRNA
376	13024	25510	2.68	2.0E-17	A1270080.1	EST_HUMAN	qt63a06.x1 NCI_CGAP_Eso2 Homo sapiens cDNA clone IMAGE:1958922 3' similar to contains Alu repetitive element;
1025	13636		1.12	2.0E-17	AA722832.1	EST_HUMAN	qt63a06.x1 NCI_CGAP_Eso2 Homo sapiens cDNA clone IMAGE:1958922 3' similar to contains Alu repetitive element;
2490	15055	27627	2.43	2.0E-17	Q28983	SWISSPROT	Zg81d04.s1 Soares_fetal_heart_Nb-H19W Homo sapiens cDNA clone IMAGE:399751 3'
2490	15055	27628	2.43	2.0E-17	Q28983	SWISSPROT	ZONADHESIN PRECURSOR
2956	15572	28049	8.06	2.0E-17	P12036	SWISSPROT	ZONADHESIN PRECURSOR
5568	18200	30848	1.57	2.0E-17	M27685.1	NT	NEUROFILAMENT TRIPLET H PROTEIN (200 KDA NEUROFILAMENT PROTEIN) (NEUROFILAMENT HEAVY POLYPEPTIDE) (NF-H)
5569	18200	30849	1.57	2.0E-17	M27685.1	NT	Mus musculus ultra high sulfur keratin gene, complete cds
6410	18013		1.8	2.0E-17	AF055068.1	NT	Mus musculus ultra high sulfur keratin gene, complete cds
6616	19213		1.58	2.0E-17	AL134881.1	EST_HUMAN	Homo sapiens MHC class I region
7773	20282	33179	0.85	2.0E-17	AB037839.1	NT	DKFZp762J0610_r1 762 (synonym: hmel2) Homo sapiens cDNA clone DKFZp762J0610 5'
							Homo sapiens mRNA for KIAA1418 protein, partial cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8028	20570	33474	1.64	2.0E-17	Q95156	SWISSPROT	OLFACTORY RECEPTOR-LIKE PROTEIN OLF3
8394	20934	33856	1.15	2.0E-17	AA300640.1	EST_HUMAN	ES113504 Testis tumor Homo sapiens cDNA 5' end similar to glycogenin
9783	22281	35287	2.45	2.0E-17	BE299888.1	EST_HUMAN	600944900F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2960615 5'
9818	22316	35297	3.36	2.0E-17	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
9818	22316	35298	3.36	2.0E-17	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
10160	22655	35650	7.23	2.0E-17	D13391.1	NT	Human CYP19 gene for aromatase cytochrome P-450, promoter region (containing two cis-acting transcriptional regulatory elements)
10281	22776	35785	0.58	2.0E-17	P98063	SWISSPROT	BONE MORPHOGENETIC PROTEIN 1 PRECURSOR (BMP-1)
10281	22776	35766	0.58	2.0E-17	P98063	SWISSPROT	BONE MORPHOGENETIC PROTEIN 1 PRECURSOR (BMP-1)
10308	22800	35791	0.63	2.0E-17	AI798902.1	EST_HUMAN	we94b04.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2348719 3'
10308	22800	35792	0.63	2.0E-17	AI798902.1	EST_HUMAN	we94b04.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2348719 3'
780	13399	25902	3.38	1.0E-17	P08183	SWISSPROT	MULTIDRUG RESISTANCE PROTEIN 1 (P-GLYCOPROTEIN 1)
1746	14336		1.2	1.0E-17	AJ271738.1	NT	Homo sapiens Xq pseudautosomal region, segment 2/2
1804	14394	26639	2.89	1.0E-17	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
2162	14739	27309	2.11	1.0E-17	P02461	SWISSPROT	COLLAGEN ALPHA 1(III) CHAIN PRECURSOR
2373	14943	27515	1.86	1.0E-17	U79410.1	NT	Homo sapiens thrombospondin 2 (THBS2) gene, promoter region and exons 1A and 1B
3625	16228		0.89	1.0E-17	AF224669.1	NT	(UBE2D3) genes, complete cds
4217	16805		8.46	1.0E-17	R09942.1	EST_HUMAN	y30e07.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:128388 5'
6759	19352	32161	1.55	1.0E-17	AI185642.1	EST_HUMAN	qe65b05.x1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1743825 3'
6759	19352	32162	1.55	1.0E-17	AI185642.1	EST_HUMAN	qe65b05.x1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1743825 3'
7146	19679	32520	1.28	1.0E-17	Q16831	SWISSPROT	URIDINE PHOSPHORYLASE (UDRPASE)
8528	21087	33988	1.23	1.0E-17	BE062744.1	EST_HUMAN	QV0-BT0263-101289-072-d07 BT0263 Homo sapiens cDNA
9919	22415	35390	0.94	1.0E-17	AW996538.1	EST_HUMAN	QV3-BN0046-220300-128-c10 BN0046 Homo sapiens cDNA
11295	23747	38805	1.82	1.0E-17	Q28824	SWISSPROT	MYOSIN LIGHT CHAIN KINASE, SMOOTH MUSCLE (MCK) [CONTAINS: TELOKIN]
2510	15074	27647	1.13	9.0E-18	AA174078.1	EST_HUMAN	zp18g12.s1 Siralagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:609862 3'
9418	21927		3.03	9.0E-18	AI472167.1	EST_HUMAN	j96d003.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2148389 3'
3854	16452	28915	1.56	8.0E-18	4758977	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
371	13020	25504	32.66	7.0E-18	AW316976.1	EST_HUMAN	xx10b04.x1 NCJ CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2837071 3' similar to gbL20868 60S
371	13020	25505	32.66	7.0E-18	AW316976.1	EST_HUMAN	RIBOSOMAL PROTEIN L4 (HUMAN);
7469	19991	32854	0.96	7.0E-18	AW987542.1	EST_HUMAN	RIBOSOMAL PROTEIN L4 (HUMAN);
							RC3-OT0091-170300-011-403 OT0091 Homo sapiens cDNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
12308	13020	25504	5.28	7.0E-18	AW316976.1	EST_HUMAN	xx10b04.x1 NCL_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2837071 3' similar to gb:L20888 60S RIBOSOMAL PROTEIN L4 (HUMAN);
12308	13020	25505	5.28	7.0E-18	AW316976.1	EST_HUMAN	xx10b04.x1 NCL_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2837071 3' similar to gb:L20888 60S RIBOSOMAL PROTEIN L4 (HUMAN);
3334	15944	28419	1.36	6.0E-18	X71791.2	NT	Rattus norvegicus partial Gdn/Pn-1 gene for gila-derived nexin/protease nexin I, enhancer region
4857	17435		3.95	6.0E-18	P52181	SWISSPROT	PROTEIN-GLUTAMINE GAMMA-GLUTAMYLTRANSFERASE (TISSUE TRANSGLUTAMINASE) (TGASE C) (TGC)
8192	20733		2.75	6.0E-18	11428155	NT	Homo sapiens similar to high-mobility group (nonhistone chromosomal) protein 4 (H. sapiens) (LOC63446), mRNA
8289	20830	33751	0.6	6.0E-18	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
11014	23528	36584	1.87	6.0E-18	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
11209	23713	38767	1.9	6.0E-18	X87344.1	NT	H. sapiens DMA, DMB, HLA-Z1, IPP2, LMP2, TAP1, LMP7, TAP2, DOB, DOB2 and RING8, 8, 13 and 14 genes
11591	24034		2.22	6.0E-18	11429885	NT	Homo sapiens similar to ribosomal protein L12 (H. sapiens) (LOC63091), mRNA
12041	24326	30895	2.24	6.0E-18	U87929.1	NT	Human acetylglucosylase (ACG2) gene, exon 4
1187	13788	26299	11.3	5.0E-18	AI280214.1	EST_HUMAN	qm65g11.x1 Soares_placenta_8tc6weeks_2NbpHP8b9W Homo sapiens cDNA clone IMAGE:1833688 3' similar to contains Alu repetitive element;
5284	17848	30273	0.94	5.0E-18	D61517.1	EST_HUMAN	HUM411F05B Clontech human fetal brain polyA+ mRNA (#6535) Homo sapiens cDNA clone GEN-411F05 5'
5477	18111	30520	1.03	5.0E-18	AF087913.1	NT	Human endogenous retrovirus HERV-P-T47D
8654	21193	34111	4.82	5.0E-18	BE143312.1	EST_HUMAN	MRO-HT0161-221099-002-c06 HT0161 Homo sapiens cDNA
10857	23378	36396	3.88	5.0E-18	10242378	NT	Homo sapiens lymphocyte activation-associated protein (LOC51088), mRNA
10857	23378	36397	3.88	5.0E-18	10242378	NT	Homo sapiens lymphocyte activation-associated protein (LOC51088), mRNA
12170	24409		6.5	5.0E-18	AW887182.1	EST_HUMAN	MR1-SN0035-060400-001-g11 SN0035 Homo sapiens cDNA
12531	24644		51.19	5.0E-18	AV650547.1	EST_HUMAN	AV650547 GLC Homo sapiens cDNA clone GLCCGA02 3'
130	12797	25283	1.98	4.0E-18	BE044078.1	EST_HUMAN	hc38h04.x1 NCL_CGAP_U11 Homo sapiens cDNA clone IMAGE:3039511 3' similar to contains MER29.b3 MER29 repetitive element;
130	12797	25284	1.98	4.0E-18	BE044078.1	EST_HUMAN	hc38h04.x1 NCL_CGAP_U11 Homo sapiens cDNA clone IMAGE:3039511 3' similar to contains MER29.b3 MER29 repetitive element;
1754	14344	26890	8.14	4.0E-18	AA621814.1	EST_HUMAN	nq24f11.s1 NCL_CGAP_Co10 Homo sapiens cDNA clone IMAGE:1144845 3' similar to gb:M26326 KERATIN, TYPE I CYTOSKELETAL 18 (HUMAN);
1933	14517		0.92	4.0E-18	AI736592.1	EST_HUMAN	w33h08.x1 NCL_CGAP_Co18 Homo sapiens cDNA clone IMAGE:2392095 3'
2242	14817	27390	1.23	4.0E-18	Q06430	SWISSPROT	N-ACETYLGLUCOSAMINIDE BETA-1,6-N-ACETYLGLUCOSAMINYLTTRANSFERASE (N-ACETYLGLUCOSAMINYLTTRANSFERASE) (I-BRANCHING ENZYME) (IGNT)

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2242	14817	27391	1.23	4.0E-18	Q06430	SWISSPROT	N-ACETYL LACTOSAMINIDE BETA-1,6-N-ACETYL GLUCOSAMINYL TRANSFERASE (N-ACETYL GLUCOSAMINYL TRANSFERASE) (I-BRANCHING ENZYME) (IGNT)
5566	18197	30643	2.32	4.0E-18	A017565.1	EST_HUMAN	ou23e06.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1627138 3'
5566	18197	30644	2.32	4.0E-18	A017565.1	EST_HUMAN	ou23e06.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1627138 3'
7787	20330		0.81	4.0E-18	AA746811.1	EST_HUMAN	nx04e08.s1 NCI_CGAP_ALV1 Homo sapiens cDNA clone IMAGE:1266998 similar to contains L1.12 L1 repetitive element ;
10884	23405	36424	7.68	4.0E-18	AA371807.1	EST_HUMAN	EST83633 Pituitary gland, subtracted (prolactin/growth hormone) II Homo sapiens cDNA 5' end similar to EST containing O family repeat
882	13496	26015	18.02	3.0E-18	AA814196.1	EST_HUMAN	P46782 40S RIBOSOMAL PROTEIN S5 ;
965	13576	26091	2.25	3.0E-18	BE08634.1	EST_HUMAN	CM0-BT0690-2:10300-298-g07 BT0690 Homo sapiens cDNA
4022	16820	28093	1.25	3.0E-18	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
6917	19576	32405	6.98	3.0E-18	BE001671.1	EST_HUMAN	FM0-BN0081-100300-001-b08 BN0081 Homo sapiens cDNA
12312	24504		8.85	3.0E-18	AW022015.1	EST_HUMAN	d131h12.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2485126 5'
272	12929	25416	2.57	2.0E-18	AW836820.1	EST_HUMAN	QY1-LT0036-150200-070-e07 LT0036 Homo sapiens cDNA
1192	13793		197.1	2.0E-18	BE256097.1	EST_HUMAN	601114352F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3355044 5'
3157	15771	28238	1.15	2.0E-18	Q39575	SWISSPROT	DYNEIN GAMMA CHAIN; FLAGELLAR OUTER ARM
5606	18235		3.99	2.0E-18	AA868610.1	EST_HUMAN	ak53e07.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1409652 3' similar to TR.O14577
5697	18323	30823	3.16	2.0E-18	D14547.1	NT	O14577 BAC CLONE RG114A06 FROM 7Q31, COMPLETE SEQUENCE ;
5697	18323	30824	3.16	2.0E-18	D14547.1	NT	Human DNA, SINE repetitive element
6038	18657		1.98	2.0E-18	BF347229.1	EST_HUMAN	602021164F1 NCI_CGAP_Bri67 Homo sapiens cDNA clone IMAGE:4156670 5'
6313	18920	31695	1	2.0E-18	X60459.1	NT	Human IFNAR gene for interferon alpha/beta receptor
6313	18920	31696	1	2.0E-18	X60459.1	NT	Human IFNAR gene for interferon alpha/beta receptor
6424	19027	31810	0.84	2.0E-18	BF352940.1	EST_HUMAN	IL3-HT0619-220700-222-C12 HT0619 Homo sapiens cDNA
6460	19061	31847	7.53	2.0E-18	AW685853.1	EST_HUMAN	hi94q01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2979984 3' similar to contains
9960	22455	35437	1.39	2.0E-18	AW151673.1	EST_HUMAN	MER19.12 MER19 repetitive element ;
9960	22455	35438	1.39	2.0E-18	AW151673.1	EST_HUMAN	x67e10.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2623146 3' similar to contains MER10.12
10854	23375	36394	4.96	2.0E-18	AW470791.1	EST_HUMAN	MER10 repetitive element ;
							x67e10.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2623146 3' similar to contains MER10.12
							MER10 repetitive element ;
							ha33d06.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2875499 3' similar to contains THR b3
							THR repetitive element ;



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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11579	24025	37093	5.24	2.0E-18	AW151299.1	EST_HUMAN	xg47e09.x1 NCL_CGAP_U11 Homo sapiens cDNA clone IMAGE:2630728 3' similar to contains MER8.b2
11970	13793		20.18	2.0E-18	BE256097.1	EST_HUMAN	MER8 repetitive element ;
4507	17091		0.85	1.0E-18	T95406.1	EST_HUMAN	601114352F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3355044 5'
5558	18180	30606	1.91	1.0E-18	AV653405.1	EST_HUMAN	ye43g05.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:120538 5' similar to contains L1 repetitive element ;
5759	18385	31099	2.18	1.0E-18	D00099.1	NT	AV653405 GLC Homo sapiens cDNA clone GLDKE11 3'
5759	18385	31100	2.18	1.0E-18	D00099.1	NT	Homo sapiens mRNA for Na,K-ATPase alpha-subunit, complete cds
6582	19180	31980	1.37	1.0E-18	AL163280.2	NT	Homo sapiens mRNA for Na,K-ATPase alpha-subunit, complete cds
8380	20920	33840	1.22	1.0E-18	AI148288.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C080
9813	22311	35293	4.45	1.0E-18	U91328.1	NT	0269d09.x1 Soares senescent fibroblasts_NbHSF Homo sapiens cDNA clone IMAGE:1680593 3' similar to contains L1.L1.L1 repetitive element ;
11918	24255	31011	4.39	1.0E-18	AF003529.1	NT	Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (HLA-H) gene, Rofet gene, and sodium phosphate transporter (NPT3) gene, complete cds
571	13202	25684	3.33	9.0E-19	AA281981.1	EST_HUMAN	Homo sapiens glycylcine 3 (GPC3) gene, partial cds and flanking repeat regions
572	13202	25684	2.68	9.0E-19	AA281981.1	EST_HUMAN	z11d06.r1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:712811 5' similar to contains MER19.12
7780	20333		5.93	9.0E-19	F06688.1	EST_HUMAN	MER19 repetitive element ;
8622	21161	34076	2.46	9.0E-19	AL163203.2	NT	z11d06.r1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:712811 5' similar to contains MER19.12
8622	21161	34077	2.46	9.0E-19	AL163203.2	NT	HSC23F051 normalized infant brain cDNA Homo sapiens cDNA clone c-23f05
11007	23521	36556	3.92	9.0E-19	AB032969.1	NT	Homo sapiens chromosome 21 segment HS21C003
11678	13202	25684	28.32	9.0E-19	AA281981.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C003
1086	13691		1.38	8.0E-19	AW974902.1	EST_HUMAN	Homo sapiens mRNA for KIAA1143 protein, partial cds
8090	20631	33544	1	8.0E-19	BE158936.1	EST_HUMAN	z11d06.r1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:712811 5' similar to contains MER19.12
2287	14861	27436	1.72	7.0E-19	4758139	NT	MER19 repetitive element ;
6584	19182	31982	1.91	7.0E-19	AF092090.1	NT	EST387007 MAGC resequences, MAGN Homo sapiens cDNA
7341	19868	32732	0.95	7.0E-19	P26444	SWISSPROT	MRO-HT0404-210200-001-g08 HT0404 Homo sapiens cDNA
9925	22421	35395	0.47	7.0E-19	A1344951.1	EST_HUMAN	Homo sapiens DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 6 (RNA helicase, 54kD) (DDX6) mRNA
11823	25088		2.85	7.0E-19	AA705684.1	EST_HUMAN	Rattus norvegicus cp151 mRNA, partial cds
3847	16446		1.21	6.0E-19	AW852830.1	EST_HUMAN	BETA CRYSTALLIN A2

Table 4

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4562	17145	29592	1.39	6.0E-19	P34986	SWISSPROT	OLFACTORY RECEPTOR 6 (M50)
4562	17145	29593	1.39	6.0E-19	P34986	SWISSPROT	OLFACTORY RECEPTOR 6 (M50)
4919	17494		1.15	6.0E-19	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
6019	18638	31378	5.29	5.0E-19	Q00193	SWISSPROT	ZONA PELLUCIDA SPERM-BINDING PROTEIN B PRECURSOR (ZONA PELLUCIDA GLYCOPROTEIN ZP-X) (RC55)
6365	18969	31747	0.79	5.0E-19	AW663302.1	EST_HUMAN	h177606.y1 NCL CGAP_GU1 Homo sapiens cDNA clone IMAGE:2968787 5'
10322	22816	35812	0.66	5.0E-19	AJ297699.1	NT	Homo sapiens partial IL-12RB1 gene for IL-12 receptor beta1 chain, exon 14
11412	23863	36924	7.61	5.0E-19	AW183725.1	EST_HUMAN	x187b02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2664171 3' similar to contains element MSR1 repetitive element
12544	24823		1.36	5.0E-19	U66060.1	NT	Human germline T-cell receptor beta chain TCRBV13S1, TCRBV6S8A2T, TCRBV5S8A3N2T, TCRBV13S6A2T, TCRBV6S9P, TCRBV5S3A2T, TCRBV13S8P, TCRBV6S3A1N1T, TCRBV5S2, TCRBV6S8A2T, TCRBV5S7P, TCRBV13S4, TCRBV6S2A1N1T, TCRBV5S4A2T, TCRBV6S4A1, TCRBV23S1A2T, TCRBV12
580	13210	25688	0.95	4.0E-19	AB007970.1	NT	Homo sapiens mRNA, chromosome 1 specific transcript KIAA0501
2707	15264	27831	1.25	4.0E-19	BF697362.1	EST_HUMAN	602130910F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4287674 5'
5593	18223	30672	1.1	4.0E-19	AF224689.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
3919	16517	28982	1.58	3.0E-19	Q28997	SWISSPROT	BETA-2 ADRENERGIC RECEPTOR
3919	16517	28983	1.58	3.0E-19	Q28997	SWISSPROT	BETA-2 ADRENERGIC RECEPTOR
4373	16960	29405	0.9	3.0E-19	O43900	SWISSPROT	LIM-ONLY PROTEIN 6 (TRIPLE LIM DOMAIN PROTEIN 6)
4373	16960	29406	0.9	3.0E-19	O43900	SWISSPROT	LIM-ONLY PROTEIN 6 (TRIPLE LIM DOMAIN PROTEIN 6)
4544	17128	29571	1.33	3.0E-19	AV708136.1	EST_HUMAN	AV708136 ADC Homo sapiens cDNA clone ADCAMA11 5'
5484	18118		0.8	3.0E-19	AF223467.1	NT	Homo sapiens NPD008 protein (NPD008) mRNA, complete cds
7418	19942		1.83	3.0E-19	11432214	NT	Homo sapiens similar to aldo-keto reductase family 1, member B11 (aldose reductase-like) (H. sapiens) (LOC63222), mRNA
9380	20319	33220	1.2	3.0E-19	X89685.1	NT	M. musculus mRNA for TPCR33 protein
12064	24347		16.44	3.0E-19	AF165520.1	NT	Homo sapiens phorbol 1 protein (PBI) mRNA, complete cds
2596	15157	27725	7.09	2.0E-19	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
4542	17126		1.26	2.0E-19	AI311783.1	EST_HUMAN	q981602.x1 NCL CGAP_K145 Homo sapiens cDNA clone IMAGE:1915898 3' similar to TR:Q69386 Q69386 POL/ENV GENE
8272	20813	33735	8.35	2.0E-19	AA012854.1	EST_HUMAN	ze34c09.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:360880 5'
9823	22321	35306	0.81	2.0E-19	Q95155	SWISSPROT	OLFACTORY RECEPTOR-LIKE PROTEIN OLF2
507	13140		1.65	1.0E-19	BE408611.1	EST_HUMAN	601304125F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3638310 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2209	14785	27359	1.48	1.0E-19	H30795.1	EST_HUMAN	yv78q07.r1 Soares adult brain N2b4HB55Y Homo sapiens cDNA clone IMAGE:184188 5' similar to contains MER10 repetitive element ;
2743	15298		2.18	1.0E-19	D38044.1	NT	Human gene for Ah-receptor, exon 7-9
2873	15491		5.99	1.0E-19	4758977	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
3448	16055	28531	1.37	1.0E-19	AA834967.1	EST_HUMAN	aj48b12.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1393831 3' similar to contains MER37.L2 MER37 repetitive element ;
5322	17884		2.47	1.0E-19	AW117377.1	EST_HUMAN	xd88h10.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2804739 3' similar to contains L1.b2.L1.L1 repetitive element ;
6225	18834	31807	3.54	1.0E-19	U12188.1	NT	Oryctolagus cuniculus sodium/dicarboxylate cotransporter mRNA, partial cds
8356	25115		0.74	1.0E-19	AA595527.1	EST_HUMAN	nh22d03.s1 NCI_CGAP_P14 Homo sapiens cDNA clone IMAGE:953093 similar to contains L1.t1.L1 repetitive element ;
7824	20137	33015	0.88	1.0E-19	U08813.1	NT	Oryctolagus cuniculus Na+/glucose cotransporter-related protein mRNA, complete cds
7824	20137	33016	0.88	1.0E-19	U08813.1	NT	Oryctolagus cuniculus Na+/glucose cotransporter-related protein mRNA, complete cds
8387	20927	33847	1.79	1.0E-19	M84657.1	NT	Rabbit phosphorylase kinase beta subunit mRNA, complete cds
8878	21215		2.48	1.0E-19	T99920.1	EST_HUMAN	yv72b02.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:123243 5' similar to contains OFR repetitive element ;
10090	22585	35578	25.84	1.0E-19	AW812259.1	EST_HUMAN	RCO-ST0174-191099-031-b05 ST0174 Homo sapiens cDNA
10099	22594	35587	1.89	1.0E-19	N44631.1	EST_HUMAN	yv31a09.r1 Soares melanocyte 2NblHM Homo sapiens cDNA clone IMAGE:272872 5'
11353	23807		2.24	1.0E-19	AW023137.1	EST_HUMAN	df49h01.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2487000 5'
11594	24037	37106	1.64	1.0E-19	U93163.1	NT	Homo sapiens MAGE-B2 (MAGE-B2), MAGE-B3 (MAGE-B3), MAGE-B4 (MAGE-B4), and MAGE-B1 (MAGE-B1) genes, complete cds
6754	19347	32155	2.39	8.0E-20	7657286	NT	Mus musculus keratin-associated protein 9-1 (Krtap9-1), mRNA
6754	19347	32156	2.39	8.0E-20	7657286	NT	Mus musculus keratin-associated protein 9-1 (Krtap9-1), mRNA
7527	20047	32817	1.4	8.0E-20	A1221371.1	EST_HUMAN	qg86f09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1842089 3'
7527	20047	32818	1.4	8.0E-20	A1221371.1	EST_HUMAN	qg86f09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1842089 3'
3314	15924	28402	0.78	7.0E-20	BF328455.1	EST_HUMAN	PM4-AN0098-050900-003-g04 AN0098 Homo sapiens cDNA
7088	18087	30443	5.61	7.0E-20	AL138120.1	EST_HUMAN	DKFZp547D092.r1 547 (synonym: hfr1) Homo sapiens cDNA clone DKFZp547D092 5'
8433	20973	33887	9.45	7.0E-20	AA557657.1	EST_HUMAN	ni46c04.s1 NCI_CGAP_P14 Homo sapiens cDNA clone IMAGE:1043718 similar to contains MER29.b2 MER29 repetitive element ;
8433	20973	33888	9.45	7.0E-20	AA557657.1	EST_HUMAN	ni46c04.s1 NCI_CGAP_P14 Homo sapiens cDNA clone IMAGE:1043718 similar to contains MER29.b2 MER29 repetitive element ;
11581	24008		9.21	7.0E-20	6912833	NT	Homo sapiens ribosomal protein L13a (RPL13A), mRNA
3811	16214	28694	4.64	6.0E-20	P39188	SWISSPROT	ALU SUBFAMILY J SEQUENCE CONTAMINATION WARNING ENTRY
4359	16946	28386	4	8.0E-20	BE922434.1	EST_HUMAN	601441231F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3816231 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4700	17282		1.11	5.0E-20	AV725123.1	EST_HUMAN	AV725123 HTC Homo sapiens cDNA clone H7C8TA01 5'
7169	19701	32548	1.33	5.0E-20	AF075301.1	EST_HUMAN	AF075301 Human fetal liver cDNA library Homo sapiens cDNA clone HA0250
7886	20428	33336	4.79	5.0E-20	W90525.1	EST_HUMAN	zh78d08.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:418191 3' similar to contains MER30.11 MER30 repetitive element;
7886	20428	33337	4.79	5.0E-20	W90525.1	EST_HUMAN	zh78d08.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:418191 3' similar to contains MER30.11 MER30 repetitive element;
8047	20589	33496	0.79	5.0E-20	BE165980.1	EST_HUMAN	MR3-HT0487-150200-113-g01 HT0487 Homo sapiens cDNA
8789	21308	34231	1.53	5.0E-20	AB028174.1	NT	Mus musculus MMAN-g mRNA, complete cds
8789	21308	34232	1.53	5.0E-20	AB028174.1	NT	Mus musculus MMAN-g mRNA, complete cds
9386	20305		1.08	5.0E-20	Q60809	SWISSPROT	HYPOTHETICAL PROTEIN DJ845024.1
8830	18454		0.92	4.0E-20	Q69880	SWISSPROT	HISTONE H2B C (H2B/C)
7860	20408		5.58	4.0E-20	AI874352.1	EST_HUMAN	tz84g03.x1 NCJ CGAP_Ov35 Homo sapiens cDNA clone IMAGE:22933396 3'
10393	22887	35882	1.36	4.0E-20	AW937489.1	EST_HUMAN	QV3-DT0043-090200-080-c04 DT0043 Homo sapiens cDNA
2184	14760	27330	1.11	3.0E-20	U03888.1	NT	Human BXP21 gene
4288	16874	29323	1.49	3.0E-20	P23273	SWISSPROT	OLFACTORY RECEPTOR-LIKE PROTEIN I14
4408	16993	29436	0.67	3.0E-20	AF230376.1	NT	Meriones unguiculatus prestin (Pres) mRNA, complete cds
4731	17312	29755	0.93	3.0E-20	AA037616.1	EST_HUMAN	zk36b12.s1 Soares_pregnant_uterus_NbHPJ Homo sapiens cDNA clone IMAGE:484895 3' similar to contains L1.13 L1 repetitive element
8865	21404		2.94	3.0E-20	D14547.1	NT	Human DNA, SINE repetitive element
10223	22718	35708	0.82	3.0E-20	BF185284.1	EST_HUMAN	601843561F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4064343 5'
10543	23080		1.84	3.0E-20	P11369	SWISSPROT	RETROVIRUS-RELATED POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE; ENDONUCLEASE]
11387	23839	36902	2.42	3.0E-20	AI284244.1	EST_HUMAN	q70d02.x1 NCJ CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1864803 3' similar to contains Alu repetitive element;
11387	23839	36903	2.42	3.0E-20	AI284244.1	EST_HUMAN	q70d02.x1 NCJ CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1864803 3' similar to contains Alu repetitive element;
11839	24202	31039	17.42	3.0E-20	BE888422.1	EST_HUMAN	601514180F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3915522 5'
863	13478		23.08	2.0E-20	AW303868.1	EST_HUMAN	x24e10.x1 NCJ CGAP_U14 Homo sapiens cDNA clone IMAGE:2761088 3' similar to SW:RS5_MOUSE P97461_40S RIBOSOMAL PROTEIN S5.;
1150	13753	26262	2.92	2.0E-20	AA516335.1	EST_HUMAN	ng68h08.s1 NCJ CGAP_Lip2 Homo sapiens cDNA clone IMAGE:940097 similar to TR:G1224066 G1224066 ORF2: FUNCTION UNKNOWN.;
1150	13753	26263	2.92	2.0E-20	AA516335.1	EST_HUMAN	ng68h08.s1 NCJ CGAP_Lip2 Homo sapiens cDNA clone IMAGE:940097 similar to TR:G1224066 G1224066 ORF2: FUNCTION UNKNOWN.;

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2843	13478		16.26	2.0E-20	AW303868.1	EST_HUMAN	x24e10.x1 NCL_CGAP_U14 Homo sapiens cDNA clone IMAGE:2781098 3' similar to SW_RS5_MOUSE
5081	17654	30094	4.35	2.0E-20	Q28983	SWISSPROT	P97461 40S RIBOSOMAL PROTEIN S5. ;
5081	17654	30095	4.35	2.0E-20	Q28983	SWISSPROT	ZONADHESIN PRECURSOR
5328	17889		1.43	2.0E-20	5174538	NT	ZONADHESIN PRECURSOR
8061	20603	33514	0.97	2.0E-20	AA309457.1	EST_HUMAN	Homo sapiens malate dehydrogenase 1, NAD (soluble) (MDH1) mRNA
9118	21654	34595	5.33	2.0E-20	D10083.1	NT	EST180328 Liver III Homo sapiens cDNA 5' end
9118	21654	34596	5.33	2.0E-20	D10083.1	NT	Homo sapiens RGH1 gene, retrovirus-like element
11622	24064	37128	1.76	2.0E-20	AA766755.1	EST_HUMAN	Homo sapiens RGH1 gene, retrovirus-like element
11622	24064	37129	1.76	2.0E-20	AA766755.1	EST_HUMAN	oe35b08.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1306935 3' similar to contains MER4.b2
12236	24809	30789	2.84	2.0E-20	H55371.1	EST_HUMAN	oe35b08.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1306935 3' similar to contains MER4.b2
2058	15396	27211	3.02	1.0E-20	AA281961.1	EST_HUMAN	CH2220310 Chromosome 22 exon Homo sapiens cDNA clone C22_391 5'
4533	17117	29563	1.18	1.0E-20	BF115158.1	EST_HUMAN	zt11d06.r1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:712811 5' similar to contains MER19.12
6975	19551	32376	0.72	1.0E-20	AF049567.1	EST_HUMAN	MER19 repetitive element ;
9090	21626	34562	2.48	1.0E-20	11418491	NT	hr84b06.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3135155 3' similar to contains L1.12 L1
11427	23878	36943	3.02	1.0E-20	AF223391.1	NT	repetitive element ;
11866	24286		6.39	1.0E-20	AA420453.1	EST_HUMAN	AF049567 Human activated dendritic cell mRNA Homo sapiens cDNA clone GA05
11681	24098		3.9	9.0E-21	AW898189.1	EST_HUMAN	Homo sapiens Autosomal Highly Conserved Protein (AHCN), mRNA
8746	21285		1.77	8.0E-21	AW674891.1	EST_HUMAN	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-48, and partial cds, alternatively spliced
11413	23864	36925	4.8	8.0E-21	AA809411.1	EST_HUMAN	nc60g08.r1 NCL_CGAP_P1 Homo sapiens cDNA clone IMAGE:745694 similar to contains L1.13 L1
11852	24212		5.02	8.0E-21	O21330	SWISSPROT	repetitive element ;
2113	14691	27258	1.61	7.0E-21	P15800	SWISSPROT	RC3-NN0068-090500-021-b03 NN0068 Homo sapiens cDNA
2113	14691	27259	1.61	7.0E-21	P15800	SWISSPROT	bb30a02.y1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:2884714 5' similar to SW_NIAM_HUMAN
3764	16365	28832	0.59	7.0E-21	AL163300.2	NT	O95169 NADH-UBIQUINONE OXIDOREDUCTASE ASH1 SUBUNIT PRECURSOR ;
4341	16928		4.31	7.0E-21	AA046502.1	EST_HUMAN	db7166.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1336835 3'
6564	18182	31960	0.79	7.0E-21	AL163218.2	NT	ATP SYNTHASE A CHAIN (PROTEIN 6)
							LAMININ BETA-2 CHAIN PRECURSOR (S-LAMININ) (LAMININ CHAIN B3)
							LAMININ BETA-2 CHAIN PRECURSOR (S-LAMININ) (LAMININ CHAIN B3)
							Homo sapiens chromosome 21 segment HS21G100
							zk67a06.r1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:487858 5'
							Homo sapiens chromosome 21 segment HS21C018

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8327	20868	33791	1.47	7.0E-21	AJ277557.1	NT	Homo sapiens dNT-2 gene for mitochondrial 5(3')-deoxyribonucleotidase (dNT-2 gene), exons 1-5
8610	21149	34084	10.47	7.0E-21	D14718.1	NT	Human chromosomal protein HMGT related gene
10022	22517	35512	0.73	7.0E-21	AW856922.1	EST_HUMAN	RC0-CT0301-271199-031-F03 CT0301 Homo sapiens cDNA
							zg73403.s1 Soares_fetal_heart_Nb1H19W Homo sapiens cDNA clone IMAGE:398981 3' similar to gb:1M14338 VITAMIN K-DEPENDENT PROTEIN S PRECURSOR (HUMAN); contains THR.t3 OFR repetitive element;
10575	23110	36123	3.16	7.0E-21	AA723404.1	EST_HUMAN	Homo sapiens PTD013 protein (PTD013), mRNA
11147	23655	36897	1.94	7.0E-21	7706688	NT	601304125F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3638310 5'
4179	16770	29219	0.89	6.0E-21	BE408611.1	EST_HUMAN	PM1-HT0454-080100-002-h09 HT0454 Homo sapiens cDNA
9063	21600		0.58	6.0E-21	BE162737.1	EST_HUMAN	Homo sapiens protein tyrosine phosphatase, non-receptor type 21 (PTPN21), mRNA
960	13571	26087	0.82	5.0E-21	5902031	NT	601649871F1 NIH_MGC_74 Homo sapiens cDNA clone IMAGE:3933880 5'
4453	17039	29482	3.12	5.0E-21	BE968839.1	EST_HUMAN	Homo sapiens melanoma antigen, family C, 1 (MAGEC1), mRNA
4922	17497	29948	5.67	5.0E-21	4885474	NT	he05e10.x1 NCL_CGAP_CML1 Homo sapiens cDNA clone IMAGE:2918154 3'
6860	19594		0.83	5.0E-21	AW440864.1	EST_HUMAN	783d11.x1 NCL_CGAP_P128 Homo sapiens cDNA clone IMAGE:3303573 3' similar to contains OFR.11 OFR repetitive element.
7086	19657	32486	1	5.0E-21	BE856505.1	EST_HUMAN	ZINC FINGER PROTEIN GLI1 (GLI-1)
10466	22960	35970	0.79	5.0E-21	Q91690	SWISSPROT	ZINC FINGER PROTEIN GLI1 (GLI-1)
10468	22960	35971	0.79	5.0E-21	Q91690	SWISSPROT	ZINC FINGER PROTEIN GLI1 (GLI-1)
11766	24157		1.49	5.0E-21	AA393574.1	EST_HUMAN	cc88e08.s1 NCL_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:727878 5'
1769	14359	26904	1.24	4.0E-21	AA970713.1	EST_HUMAN	PMS3 MRNA ; contains OFR.11 OFR repetitive element ;
6953	19630	32355	3.04	4.0E-21	AB019576.1	NT	Rattus norvegicus mRNA for rTIM, complete cds
							Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (HLA-H) gene, Rofet gene, and sodium phosphate transporter (NPT3) gene, complete cds
9695	22194	35167	0.61	4.0E-21	U91328.1	NT	z115006.s1 Stratagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:629771 3'
1877	14463	27020	5.92	3.0E-21	AA218891.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C001
2313	14885	27460	1.2	3.0E-21	AL163201.2	NT	Homo sapiens LGMD2B gene
3116	15730	28200	3.35	3.0E-21	AJ007973.1	NT	Homo sapiens dNT-2 gene for mitochondrial 5(3')-deoxyribonucleotidase (dNT-2 gene), exons 1-5
							Homo sapiens dNT-2 gene for mitochondrial 5(3')-deoxyribonucleotidase (dNT-2 gene), exons 1-5
5691	18317	30816	0.97	3.0E-21	AJ277557.1	NT	Homo sapiens dNT-2 gene for mitochondrial 5(3')-deoxyribonucleotidase (dNT-2 gene), exons 1-5
5691	18317	30817	0.97	3.0E-21	AJ277557.1	NT	Homo sapiens dNT-2 gene for mitochondrial 5(3')-deoxyribonucleotidase (dNT-2 gene), exons 1-5
5913	18535		0.75	3.0E-21	AV661044.1	EST_HUMAN	AV661044 GLC Homo sapiens cDNA clone GLCGOAT0 3'
6326	18932		60.27	3.0E-21	BF184739.1	EST_HUMAN	601844465F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4064945 5'

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7129	19489	32287	7.35	3.0E-21	BF361093.1	EST_HUMAN	RC1-OT0083-100800-019-g08 OT0083 Homo sapiens cDNA
9809	22109	35071	0.98	3.0E-21	AW897760.1	EST_HUMAN	CM1-NN0083-280400-203-h08 NN0083 Homo sapiens cDNA
12359	25013	30617	2.75	3.0E-21	AL163213.2	NT	Homo sapiens chromosome 21 segment HS21C013
157	12820		19.17	2.0E-21	BE163247.1	EST_HUMAN	QV3-HT0458-170200-090-g12 HT0458 Homo sapiens cDNA
970	13581	26093	0.71	2.0E-21	AB007857.2	NT	Homo sapiens mRNA for KIAA0397 protein, partial cds
970	13581	26094	0.71	2.0E-21	AB007857.2	NT	Homo sapiens mRNA for KIAA0397 protein, partial cds
1256	13853		2	2.0E-21	BE064410.1	EST_HUMAN	RC4-BT0311-141199-011-h06 BT0311 Homo sapiens cDNA
2665	15223	27795	2.45	2.0E-21	Q28983	SWISSPROT	ZONADHESIN PRECURSOR
2665	15223	27796	2.45	2.0E-21	Q28983	SWISSPROT	ZONADHESIN PRECURSOR
5875	18302	30784	1.81	2.0E-21	AI624582.1	EST_HUMAN	ts30R3.x1 NCL CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2230109 3' similar to TR:Q99854 Q99854
5765	18391	31103	0.91	2.0E-21	AA027211.1	EST_HUMAN	HYPOTHETICAL 51.1 KD PROTEIN ;
5765	18391	31104	0.91	2.0E-21	AA027211.1	EST_HUMAN	z987a12.r1 Soares fetal heart_NbHH19W Homo sapiens cDNA clone IMAGE:366910 5'
8304	20845	33768	5.08	2.0E-21	BE141785.1	EST_HUMAN	z987a12.r1 Soares fetal heart_NbHH19W Homo sapiens cDNA clone IMAGE:366910 5'
8757	21298	34216	3.84	2.0E-21	AU136779.1	EST_HUMAN	QV0-HT0103-091199-050-g11 HT0103 Homo sapiens cDNA
10937	23484		2.2	2.0E-21	BE350127.1	EST_HUMAN	AU136779 PLACE1 Homo sapiens cDNA clone PLACE1005052 5'
11199	23704	36754	2.24	2.0E-21	BE973829.1	EST_HUMAN	h109g01.x1 NCL CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3148256 3' similar to contains MER29.b3
11199	23704	36755	2.24	2.0E-21	BE973829.1	EST_HUMAN	MER29 repetitive element ;
12072	24351		10.78	2.0E-21	AF176815.1	NT	60T680636F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:3951008 5'
1298	13892	26415	1.54	1.0E-21	AA557857.1	EST_HUMAN	60T680636F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:3951008 5'
1448	14040		3.58	1.0E-21	AI601284.1	EST_HUMAN	Homo sapiens putative 8-hydroxyguanine DNA glycosylase gene, complete cds
5397	17955	30366	14.37	1.0E-21	P08548	SWISSPROT	nl46c04.s1 NCL CGAP_P14 Homo sapiens cDNA clone IMAGE:1043718 similar to contains MER29.b2
6613	18210		2.59	1.0E-21	AL079752.1	EST_HUMAN	MER29 repetitive element ;
7243	19772	32626	4.56	1.0E-21	AI223104.1	EST_HUMAN	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG
10477	22971		1.45	1.0E-21	5730038	NT	DKFZp4340830_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp4340830 5'
12485	24616		2.46	1.0E-21	AF046133.1	EST_HUMAN	qg47e05.x1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1838336 3' similar to gb:M64241 QM
4500	17084	29534	2.78	9.0E-22	AI702436.1	EST_HUMAN	PROTEIN (HUMAN);
8540	21079	33988	1.2	9.0E-22	AL163201.2	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
8540	21079	33989	1.2	9.0E-22	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
10870	23202	38215	5.06	9.0E-22	AV761874.1	EST_HUMAN	NEUTRAL PROTEASE LARGE SUBUNIT ;
							Homo sapiens chromosome 21 segment HS21C001
							Homo sapiens chromosome 21 segment HS21C001
							AV761874 MDS Homo sapiens cDNA clone MDSGCCG05 5'

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11553	24001	37073	3.44	9.0E-22	AU140358.1	EST_HUMAN	AU140358 PLACE2 Homo sapiens cDNA clone PLACE200394 5'
984	13596		4.19	8.0E-22	BE144748.1	EST_HUMAN	CM0-HT0179-281099-076-h05 HT0179 Homo sapiens cDNA
7837	20379		3.26	8.0E-22	AA046502.1	EST_HUMAN	Zk67a08.t1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:487858 5'
693	13316	25801	5.27	7.0E-22	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
4370	16957	29399	2.55	7.0E-22	Q61838	SWISSPROT	ALPHA-2-MACROGLOBULIN PRECURSOR (ALPHA2M)
5190	17755	30184	1.12	7.0E-22	AB009681.1	NT	Homo sapiens gene for activin receptor type IIB, complete cds
8624	21163		1.99	7.0E-22	AF151054.1	NT	Homo sapiens HSPC220 mRNA, complete cds
8766	21305	34227	3.39	7.0E-22	M78590.1	EST_HUMAN	EST00738 Fetal brain, Stralagene (cat#836206) Homo sapiens cDNA clone HFBCF07
9520	22020	34977	1.83	7.0E-22	AF009680.1	NT	Homo sapiens T cell receptor beta locus, TCRBV7S3A2 to TCRBV12S2 region
8184	20725		2.67	6.0E-22	AW029123.1	EST_HUMAN	wx05g07.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2542812 3'
6640	19236	32038	2.82	5.0E-22	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
10221	22716	35707	7.63	5.0E-22	U60822.1	NT	Homo dystrophin (DMD) gene, exons 7, 8 and 9, and partial cds
12314	24508		2.92	5.0E-22	BF476511.1	EST_HUMAN	naa27b06.x1 NCI_CGAP_Pr28 Homo sapiens cDNA clone IMAGE:3255898 3' similar to contains Alu repetitive element;
3698	16299		0.83	4.0E-22	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
8049	20591	33498	0.53	4.0E-22	AV703223.1	EST_HUMAN	AV703223 ADB Homo sapiens cDNA clone ADBAUE12 5'
8352	25122		3.36	4.0E-22	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
10601	23135	36149	2.85	4.0E-22	BF218030.1	EST_HUMAN	601882813F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4095434 5'
12492	24821		3.39	4.0E-22	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
994	13608		0.99	3.0E-22	AI469679.1	EST_HUMAN	bm14h10.x1 NCI_CGAP_Ca14 Homo sapiens cDNA clone IMAGE:2156811 3' similar to gb.L19593 HIGH AFFINITY INTERLEUKIN-8 RECEPTOR B (HUMAN); contains L1.1 L1 repetitive element;
3735	16336		1.44	3.0E-22	D14718.1	NT	Human chromosomal protein HMGT related gene
4921	17496	28947	3.04	3.0E-22	AI080125.1	EST_HUMAN	qib28c07.x1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:1697580 3' similar to contains MER12.12 MER12 repetitive element;
8172	20713		1.07	3.0E-22	BE158613.1	EST_HUMAN	QV0-HT0368-090200-099-f12 HT0368 Homo sapiens cDNA
8177	20718	33633	2.55	3.0E-22	BE089841.1	EST_HUMAN	RC5-BT0707-150300-021-H10 BT0707 Homo sapiens cDNA
8301	20842	33762	1	3.0E-22	X60660.1	NT	Rattus RY2G5 mRNA for a potential ligand-binding protein
8301	20842	33763	1	3.0E-22	X60660.1	NT	Rattus RY2G5 mRNA for a potential ligand-binding protein
1996	14578		2.49	2.0E-22	N24942.1	EST_HUMAN	yt73c05.s1 Soares_melanocyte_2NbHM Homo sapiens cDNA clone IMAGE:267369 3'
2564	15128	27697	1.61	2.0E-22	P24916	SWISSPROT	IMMEDIATE EARLY GENE 13 PROTEIN PRECURSOR
3467	16074	28547	5.3	2.0E-22	8394043	NT	Homo sapiens protein kinase, AMP-activated, gamma 3 non-catalytic subunit (PRKAG3), mRNA
4310	16896	29340	1.35	2.0E-22	AW817794.1	EST_HUMAN	PM1-ST0262-261199-001-d12 ST0262 Homo sapiens cDNA
6015	24753	31372	1.95	2.0E-22	W39456.1	EST_HUMAN	zc20f01.t1 Soares_senescent_fibroblasts_NbHSF Homo sapiens cDNA clone IMAGE:322873 5' similar to gb:X72308 MONOCYTE CHEMOTACTIC PROTEIN 3 PRECURSOR (HUMAN);



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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6324	18930	31706	3.3	2.0E-22	BF092116.1	EST_HUMAN	RC0-TN0079-150900-025-h12 TN0079 Homo sapiens cDNA
9619	22119	35082	1.59	2.0E-22	AI276522.1	EST_HUMAN	q176h08.x1 Soares_NhhMPu_S1 Homo sapiens cDNA clone IMAGE:1878299 3' similar to contains MER29.I3 MER29 repetitive element.
9712	22210	35182	0.69	2.0E-22	AA715315.1	EST_HUMAN	nv04h11.s1 NCI_CGAP_P22 Homo sapiens cDNA clone IMAGE:1219269 3'
9712	22210	35183	0.69	2.0E-22	AA715315.1	EST_HUMAN	nv04h11.s1 NCI_CGAP_P22 Homo sapiens cDNA clone IMAGE:1219269 3'
11595	24038	37107	2.33	2.0E-22	AW418960.1	EST_HUMAN	ha24f04.x1 NCI_CGAP_K1f12 Homo sapiens cDNA clone IMAGE:2874855 3'
11644	24605	30886	2.57	2.0E-22	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
1921	14508	27063	1.59	1.0E-22	AW865517.1	EST_HUMAN	PM4-SN0020-010400-009-h02 SN0020 Homo sapiens cDNA
2820	15182	27748	1.88	1.0E-22	U50871.1	NT	Human familial Alzheimer's disease (STM2) gene, complete cds
3457	16084	28539	1.45	1.0E-22	D14547.1	NT	Human DNA, SINE repetitive element
7723	20231	33120	1.28	1.0E-22	BE084667.1	EST_HUMAN	MFR0-BT0659-220200-002-h07 BT0659 Homo sapiens cDNA
10446	22940	35950	0.84	1.0E-22	AI365435.1	EST_HUMAN	qz09b07.x1 NCI_CGAP_CLL1 Homo sapiens cDNA clone IMAGE:2020981 3' similar to contains MER28.b2 MER29 repetitive element.
10446	22940	35951	0.84	1.0E-22	AI365435.1	EST_HUMAN	qz09b07.x1 NCI_CGAP_CLL1 Homo sapiens cDNA clone IMAGE:2020981 3' similar to contains MER28.b2 MER29 repetitive element.
12540	24650		12.67	9.0E-23	AW802801.1	EST_HUMAN	IL2-UM0078-070400-061-F11 UM0078 Homo sapiens cDNA
3629	16232	28707	0.64	8.0E-23	AF198349.1	NT	Gallus gallus Dach2 protein (Dach2) mRNA, complete cds
3352	15980		2.37	7.0E-23	AV647246.1	EST_HUMAN	AV647246 GLC Homo sapiens cDNA clone GLCAWC07 3'
10918	23437	36458	4.4	7.0E-23	5031952	NT	Homo sapiens Ndc56 (D. melanogaster)-like protein (NOT56L) mRNA
3481	16087		1.63	6.0E-23	AF199333.1	NT	Rattus norvegicus RIM1B (Rim1B) mRNA, complete cds
4355	16942	29384	1.1	6.0E-23	AL163249.2	NT	Homo sapiens chromosome 21 segment HS21C049
11780	24173	31026	3.44	6.0E-23	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
11790	24173	31027	3.44	6.0E-23	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
11890	24300	30985	4.29	6.0E-23	AI209130.1	EST_HUMAN	qg59c03.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1839480 3' similar to SW:MV10_MOUSE_P23249 PROTEIN MOV-10.
5635	18284	30739	5.78	5.0E-23	U82671.2	NT	Homo sapiens chromosome Xq28 melanoma antigen family A2a (MAGEA2A), melanoma antigen family A12 (MAGEA12), melanoma antigen family A2b (MAGEA2B), melanoma antigen family A3 (MAGEA3), cetractin (CALT), NAD(P)H dehydrogenase-like protein (NSDHL), and L1>
6386	24763	31770	3.68	5.0E-23	AF179818.1	NT	Pongo pygmaeus olfactory receptor (PPY116) gene, partial cds
7463	24763	31770	3.02	5.0E-23	AF179818.1	NT	Pongo pygmaeus olfactory receptor (PPY116) gene, partial cds
5375	17934	30348	0.92	3.0E-23	AW846839.1	EST_HUMAN	QV3-CT0194-031189-004-f08 CT0194 Homo sapiens cDNA
6569	19187	31963	1.01	3.0E-23	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6569	19167	31964	1.01	3.0E-23	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
7780	20323	33228	4.27	3.0E-23	AA130165.1	EST_HUMAN	z35g09.r1 Soares_pregnant_uterus_NbHPJ Homo sapiens cDNA clone IMAGE:503968 5' similar to contains MER29.12 MER29 repetitive element;
9173	21750	34694	2.69	3.0E-23	Z70684.1	NT	Human endogenous retroviral element HC2
9173	21750	34695	2.69	3.0E-23	Z70684.1	NT	Human endogenous retroviral element HC2
10219	22714		1.23	3.0E-23	AW897927.1	EST_HUMAN	RC3-NIN0066-270400-011-h01 NN0066 Homo sapiens cDNA
10989	23503		1.54	3.0E-23	AF280107.1	NT	Homo sapiens cytochrome P450 polypeptide 43 (CYP3A43) gene, partial cds; cytochrome P450 polypeptide 4 (CYP3A4) and cytochrome P450 polypeptide 7 (CYP3A7) genes, complete cds; and cytochrome P450 polypeptide 5 (CYP3A5) gene, partial cds
694	13317	25802	3.65	2.0E-23	AJ289880.1	NT	Homo sapiens KIAA0851 gene (partial), XT3 gene and LZTFL1 gene
1182	15391		4.01	2.0E-23	M55270.1	NT	Human matrix Gla protein (MGP) gene, complete cds
2821	15373	27942	1.47	2.0E-23	P22105	SWISSPROT	TENASCIN-X PRECURSOR (TN-X) (HEXABRACHION-LIKE)
2821	15373	27943	1.47	2.0E-23	P22105	SWISSPROT	TENASCIN-X PRECURSOR (TN-X) (HEXABRACHION-LIKE)
3418	16026		1.36	2.0E-23	AJ201458.1	EST_HUMAN	qs73111.x1 NCI CGAP P128 Homo sapiens cDNA clone IMAGE:1943757 3' similar to TR.Q13537 Q13537
3779	16379		3.93	2.0E-23	BE165980.1	EST_HUMAN	MER37 TRANSPOSABLE ELEMENT, COMPLETE CONSENSUS SEQUENCE.;
4048	16645	28112	3.01	2.0E-23	H59931.1	EST_HUMAN	MR3-HT0487-150200-113-g01 HT0487 Homo sapiens cDNA
4048	16645	28113	3.01	2.0E-23	H59931.1	EST_HUMAN	yr16a02.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:205418 5'
							yr16a02.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:205418 5'
7814	20357		4.59	2.0E-23	AF280107.1	NT	Homo sapiens cytochrome P450 polypeptide 43 (CYP3A43) gene, partial cds; cytochrome P450 polypeptide 4 (CYP3A4) and cytochrome P450 polypeptide 7 (CYP3A7) genes, complete cds; and cytochrome P450 polypeptide 5 (CYP3A5) gene, partial cds
8777	21316	34238	1.05	2.0E-23	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
11772	24161		3.5	2.0E-23	M32658.1	NT	Human alcohol dehydrogenase gamma subunit (ADH3) gene, exon 1
12326	24512		4.44	2.0E-23	AF009880.1	NT	Homo sapiens T cell receptor beta locus, TCRBV7S3A2 to TCRBV12S2 region
12454	25017		1.35	2.0E-23	AU133931.1	EST_HUMAN	AU133931 OVARC1 Homo sapiens cDNA clone OVARC1000946 5'
4627	17210	28660	1.72	1.0E-23	AL163252.2	NT	Homo sapiens chromosome 21 segment HS21C052
4881	17456		5.35	1.0E-23	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
6821	19411		4.93	1.0E-23	BE378471.1	EST_HUMAN	601236455F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3608653 5'
8297	20838	33759	4.53	1.0E-23	AA448097.1	EST_HUMAN	zw82c06.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:782698 5' similar to contains PTR5.12 PTR5 repetitive element;
578	13208		1.48	9.0E-24	AA663213.1	EST_HUMAN	ab75a08.s1 Stralagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:852758 3' similar to
4753	17334	29777	1.16	8.0E-24	P23269	SWISSPROT	TR:E19822 E19822 CA PROTEIN.;
4753	17334	29778	1.16	8.0E-24	P23269	SWISSPROT	OLFACTORY RECEPTOR-LIKE PROTEIN I3
							OLFACTORY RECEPTOR-LIKE PROTEIN I3

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6576	19174	31973	1.08	8.0E-24	11422027	NT	Homo sapiens capping protein (actin filament) muscle Z-line, alpha 2 (CAPZA2), mRNA
3941	16539		1.23	7.0E-24	AW937954.1	EST_HUMAN	QV0-DT0047-170200-122-408 DT0047 Homo sapiens cDNA
5345	17806		18.11	7.0E-24	AL039498.1	EST_HUMAN	DKFZp434A2311_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434A2311 5'
10519	23057		2.8	7.0E-24	AW303317.1	EST_HUMAN	xv1703.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2813405 3' similar to contains Alu repetitive element; contains MER19.12 MER19 repetitive element;
735	13355		2.28	6.0E-24	AB001421.1	NT	Macaca fasciata mRNA for Testis-Specific Protein Y (TSPY), complete cds
871	13486	26001	12.95	6.0E-24	AL163249.2	NT	Homo sapiens chromosome 21 segment HS21C049
4042	16640	28107	9.12	5.0E-24	AJ228043.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 3/3
7735	20243	33134	0.9	5.0E-24	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
6087	18703	31451	3.17	4.0E-24	AA594178.1	EST_HUMAN	nm31h05.s1 NCL_CGAP_Gas1 Homo sapiens cDNA clone IMAGE:1085529 3' similar to SW:POL_MLVRK P31795 POL POLYPROTEIN;
8815	21154	34088	1.37	4.0E-24	AW813711.1	EST_HUMAN	RC3-ST0197-130100-014-106 ST0197 Homo sapiens cDNA
11059	23571	36608	1.65	4.0E-24	BE544822.1	EST_HUMAN	601078812F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3464498 5'
12165	24405	30880	4.77	4.0E-24	AB029016.1	NT	Homo sapiens mRNA for KIAA1083 protein, partial cds
12428	24611	30889	1.37	4.0E-24	11418318	NT	Homo sapiens G-2 and S-phase expressed 1 (GTSE1), mRNA
8362	20902		2.57	3.0E-24	AW614871.1	EST_HUMAN	hh68c08.x1 NCL_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2987950 3' similar to contains MER29.b2 MER29 repetitive element;
8414	20954		1.51	3.0E-24	AW962076.1	EST_HUMAN	EST374149 MAGE resequences, MAGG Homo sapiens cDNA
9386	21809	34760	3.79	3.0E-24	AL163252.2	NT	Homo sapiens chromosome 21 segment HS21C052
12247	24458	30959	2.85	3.0E-24	BF127782.1	EST_HUMAN	60181049F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4053386 5'
2384	14953	27525	3.07	2.0E-24	AA167539.1	EST_HUMAN	zp11109.r1 Stratagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:809161 5'
3887	16465		0.82	2.0E-24	AW898189.1	EST_HUMAN	RC3-NN0068-090500-021-603 NN0068 Homo sapiens cDNA
7490	20013	32879	1.14	2.0E-24	AF088824.1	NT	Mus musculus rho/rac-interacting citron kinase (Crik) mRNA, complete cds
8675	21214	34135	2.59	2.0E-24	AL119158.1	EST_HUMAN	DKFZp761L1712_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761L1712 5'
8712	21251		0.87	2.0E-24	H69214.1	EST_HUMAN	yr82009.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:212728 5' similar to contains MER28 repetitive element;
9798	22268	35250	0.82	2.0E-24	AI521759.1	EST_HUMAN	ti77a09.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2138008 3'
9798	22268	35251	0.82	2.0E-24	AI521759.1	EST_HUMAN	ti77a09.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2138008 3'
12080	25062		13.88	2.0E-24	M28877.1	NT	Human O family dispersed repeat element
1734	14325	28867	3.18	1.0E-24	7706340	NT	Homo sapiens CGI-127 protein (LOC51646), mRNA
2697	15254		1.43	1.0E-24	AW820194.1	EST_HUMAN	QV0-ST0294-100400-185-c10 ST0294 Homo sapiens cDNA
3055	15671	28147	0.76	1.0E-24	D86423.1	NT	Mus musculus mRNA for HGT keratin, partial cds
4357	16944		1.97	1.0E-24	AF143313.1	NT	Homo sapiens PTEN (PTEN) gene, exon 2

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7551	20070	32846	4.06	1.0E-24	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
7713	20222	33109	0.8	1.0E-24	BE144526.1	EST_HUMAN	MR0-HT0168-271199-005-d09 HT0168 Homo sapiens cDNA
7885	20427	33335	1.38	1.0E-24	AW901164.1	EST_HUMAN	CNV0-NN1010-130300-281-d07 NN1010 Homo sapiens cDNA
11545	23993	37084	1.58	9.0E-25	7706707	NT	Homo sapiens putative secreted protein (SIG11), mRNA
5443	17998		2.05	8.0E-25	6138972	NT	Homo sapiens adrenergic, beta, receptor kinase 2 (ADRBK2), mRNA
5136	17708	30140	2.99	7.0E-25	AA483944.1	EST_HUMAN	ne92e10 s1 NCI_CGAP_Kid1 Homo sapiens cDNA clone IMAGE:911754 similar to contains MER1.b2
8160	20701	33616	5.07	7.0E-25	AA468846.1	EST_HUMAN	MER1 repetitive element ; ne06a09.s1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:880408 3' similar to contains THR.b2 THR repetitive element ;
11547	23995	37067	9.93	7.0E-25	AA583540.1	EST_HUMAN	nt25h06 s1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:914843 similar to SW.R14A_YEAST
7065	18084		4.4	6.0E-25	W87623.1	EST_HUMAN	P36105 PROBABLE 60S RIBOSOMAL PROTEIN L14EA. ;
7706	20215	33103	10.77	6.0E-25	7305360	NT	zh55h07.r1 Scars_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:416889 5'
11186	23701	36752	4.55	5.0E-25	AW979107.1	EST_HUMAN	Mus musculus otogelin (Otog), mRNA
1496	14098	26628	2.75	4.0E-25	T98107.1	EST_HUMAN	EST391217 MAGE resequences, MAGP Homo sapiens cDNA
3449	16056		3.2	4.0E-25	AW887871.1	EST_HUMAN	ye56h04.r1 Scars_fetal_liver_spleen_INFLS_Homo sapiens cDNA clone IMAGE:121783 5'
3974	16572	29042	1.42	4.0E-25	AF000368.1	NT	PM3-OT0093-280200-001-g07 OT0093 Homo sapiens cDNA
4407	16992		4.05	4.0E-25	BE170957.1	EST_HUMAN	Rattus norvegicus voltage-gated sodium channel mRNA, complete cds
3362	15970	28447	3.73	3.0E-25	8923321	NT	QV3-HT0543-140400-149-e11 HT0543 Homo sapiens cDNA
3362	15970	28448	3.73	3.0E-25	8923321	NT	Homo sapiens hypothetical protein FLJ20344 (FLJ20344), mRNA
5022	17588	30039	0.69	3.0E-25	P28622	SWISSPROT	Homo sapiens hypothetical protein FLJ20344 (FLJ20344), mRNA
6728	19322	32127	0.84	3.0E-25	AA603590.1	EST_HUMAN	KALLISTATIN PRECURSOR (KALLIKREIN INHIBITOR) (PROTEASE INHIBITOR 4)
8279	20820	33739	3.84	3.0E-25	AL163210.2	NT	np27h02 s1 NCI_CGAP_P122 Homo sapiens cDNA clone IMAGE:1117515 3' similar to gb:M61866 ZINC FINGER PROTEIN 85 (HUMAN);
10911	23430	36450	2.02	3.0E-25	AA579013.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C010
1392	13986	26513	9.82	2.0E-25	5032158	NT	nt30h10 s1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:915331 similar to contains L1.11 L1 repetitive element ;
2347	14918	27492	7.6	2.0E-25	BE888016.1	EST_HUMAN	Homo sapiens transducin (beta)-like 1 (TBL1) mRNA
2858	15142	27711	3.84	2.0E-25	P17008	SWISSPROT	601511530F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913087 5'
4268	18854	29301	2.04	2.0E-25	P17008	SWISSPROT	40S RIBOSOMAL PROTEIN S16
4268	18854	29302	2.04	2.0E-25	P17008	SWISSPROT	40S RIBOSOMAL PROTEIN S16
9680	22179	35154	1.9	2.0E-25	AL449573.1	EST_HUMAN	40S RIBOSOMAL PROTEIN S16
387	13033	25522	0.71	1.0E-25	AL040229.1	EST_HUMAN	AL449573 Homo sapiens Testis (Stanley GS) Homo sapiens cDNA
1291	13886		1.67	1.0E-25	9635487	NT	DKFZp434H0313_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434H0313 5'
							Human endogenous retrovirus, complete genome

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2478	15045	27613	1.13	1.0E-25	Q08055	SWISSPROT	ATP SYNTHASE LIPID-BINDING PROTEIN P2 PRECURSOR (ATPASE PROTEIN 9) (SUBUNIT C)
4984	17558	30001	3.08	1.0E-25	BE162737.1	EST_HUMAN	PM1-HT0454-080100-002-h09 HT0454 Homo sapiens cDNA
6883	19279		0.85	1.0E-25	AA189080.1	EST_HUMAN	zq45b06.s1 Stratagene hNT neuron (#837233) Homo sapiens cDNA clone IMAGE:632827 3' similar to contains Alu repetitive element;
6890	24775	32460	3.08	1.0E-25	AA582690.1	EST_HUMAN	nn54h11.s1 NCI_CGAP_Kid6 Homo sapiens cDNA clone IMAGE:1087749 3'
7855	20397	33303	4.27	1.0E-25	AA709079.1	EST_HUMAN	z88g04.s1 Soares_fetal_hear1_NbH19W Homo sapiens cDNA clone IMAGE:384822 3' similar to contains PTR5.13 PTR5 repetitive element ;
9465	21890	34948	0.68	1.0E-25	X60660.1	NT	R.rattus RY2G5 mRNA for a potential ligand-binding protein
9465	21890	34947	0.68	1.0E-25	X60660.1	NT	R.rattus RY2G5 mRNA for a potential ligand-binding protein
10849	23370	36389	3.71	1.0E-25	U93163.1	NT	Homo sapiens MAGE-B2 (MAGE-B2), MAGE-B3 (MAGE-B3), MAGE-B4 (MAGE-B4), and MAGE-B1 (MAGE-B1) genes, complete cds
11787	24171	36777	1.9	1.0E-25	D14547.1	NT	Human DNA, SINE repetitive element
11787	24171	36778	1.9	1.0E-25	D14547.1	NT	Human DNA, SINE repetitive element
2523	15087	27660	1.57	9.0E-28	AL163218.2	NT	Homo sapiens chromosome 21 segment HS21C018
11845	24828		1.69	9.0E-26	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
5872	18484		1.55	8.0E-26	D14547.1	NT	Human DNA, SINE repetitive element
1821	14214	28745	0.92	7.0E-26	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
4052	16849	29117	1.16	7.0E-26	X89211.1	NT	H.sapiens DNA for endogenous retroviral like element
4239	16827	29278	2.04	7.0E-26	AW340153.1	EST_HUMAN	hd02e12.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2808366 3'
5819	18443	31165	0.86	7.0E-26	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
11520	23968		8.48	7.0E-26	AA115895.1	EST_HUMAN	zn30d08.r1 Stratagene neuroepithelium NT2RAM1 937234 Homo sapiens cDNA clone IMAGE:548943 5' similar to gb:U14338 VITAMIN K-DEPENDENT PROTEIN S PRECURSOR (HUMAN);
12376	24544		3.49	7.0E-26	AW954559.1	EST_HUMAN	EST366629 MAGE resequences, MAGC Homo sapiens cDNA
2267	14841	27418	2.32	6.0E-26	AF029308.1	NT	Homo sapiens chromosome 9 duplication of the T cell receptor beta locus and trypsinogen gene families
3390	15998	28476	1.37	6.0E-26	AA206131.1	EST_HUMAN	zq52h04.r1 Stratagene neuroepithelium (#837231) Homo sapiens cDNA clone IMAGE:646271 5'
10426	22920	35922	0.48	6.0E-26	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
10426	22920	35923	0.48	6.0E-26	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
11531	23978	37049	5.92	6.0E-26	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
1219	13819	26334	3.55	5.0E-26	A1708235.1	EST_HUMAN	as38h08.x1 Barstead aorta HPLRB6 Homo sapiens cDNA clone IMAGE:2319519 3' similar to WP:F49C12.11 CE03371 ;
1219	13819	26335	3.55	5.0E-26	A1708235.1	EST_HUMAN	as38h08.x1 Barstead aorta HPLRB6 Homo sapiens cDNA clone IMAGE:2319519 3' similar to WP:F49C12.11 CE03371 ;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1591	14184		2.25	4.0E-26	AA329548.1	EST_HUMAN	EST33446 Embryo, 12 week II Homo sapiens cDNA 5' end
9333	21847		3.53	4.0E-26	7657670	NT	Homo sapiens upstream binding transcription factor, RNA polymerase I (UBTF), mRNA
10539	23078	36090	3.69	4.0E-26	BE266187.1	EST_HUMAN	601191345F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3535210 5'
1798	14388	28930	1.2	3.0E-26	D14547.1	NT	Human DNA, SINE repetitive element
2046	14828	27197	1	3.0E-26	AL045855.2	EST_HUMAN	DKFZp4341066_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp4341066 5'
2077	14657		2.22	3.0E-26	AA115895.1	EST_HUMAN	zn30d08.r1 Stratiene neuroepithelium NT2RAMI 937234 Homo sapiens cDNA clone IMAGE:548943 5'
3846	18445	28906	1.48	3.0E-26	AA152484.1	EST_HUMAN	similar to gb:M14338 VITAMIN K-DEPENDENT PROTEIN S PRECURSOR (HUMAN);
3846	18445	28907	1.48	3.0E-26	AA152484.1	EST_HUMAN	G695374 THYROID RECEPTOR INTERACTOR ;
6961	19489	32311	6.04	3.0E-26	BF245458.1	EST_HUMAN	zn30f10.r1 Stratiene colon (#937204) Homo sapiens cDNA clone IMAGE:588427 5' similar to TR:G695374
10804	23138		1.97	3.0E-26	AF036405.1	NT	z30f10.r1 Stratiene colon (#937204) Homo sapiens cDNA clone IMAGE:588427 5' similar to TR:G695374
11442	23892	36957	2.58	3.0E-26	AW875651.1	EST_HUMAN	601864963F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4083278 5'
11442	23892	36958	2.58	3.0E-26	AW875651.1	EST_HUMAN	Homo sapiens MLL (MLL) gene, exons 1-3, and partial cds
11472	23922	36992	13.09	3.0E-26	AA583173.1	EST_HUMAN	QV2-PT0012-040400-124-e05 PT0012 Homo sapiens cDNA
12568	24665		2.21	3.0E-26	AW073434.1	EST_HUMAN	QV2-PT0012-040400-124-e05 PT0012 Homo sapiens cDNA
12661	24732	30857	1.48	3.0E-26	AF165520.1	NT	nm37d05.s1 NCI_CGAP_GC5 Homo sapiens cDNA clone IMAGE:1086057 3' similar to contains OFR.t1
710	13331	25818	5.58	2.0E-26	AL163282.2	NT	xa57b09.x1 NCI_CGAP_HSC2 Homo sapiens cDNA clone IMAGE:2570873 3' similar to contains MER30.t1
1909	14494		2.42	2.0E-26	AL038099.2	EST_HUMAN	MER30 repetitive element ;
3268	15880	28363	4.94	2.0E-26	X86994.1	NT	Homo sapiens phorbol I protein (PB1) mRNA, complete cds
10633	23165		3.35	2.0E-26	D87675.1	NT	Homo sapiens chromosome 21 segment HS21C082
11096	23607	36647	5.24	2.0E-26	AI801412.1	EST_HUMAN	DKFZp566L171_s1 566 (synonym: htkd2) Homo sapiens cDNA clone DKFZp566L171 3'
11296	23748		2.17	2.0E-26	AF055066.1	NT	M.musculus mRNA for astrocytic phosphoprotein, PEA-15
11894	24237		1.85	2.0E-26	AB037859.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
12101	25005	30612	3.03	2.0E-26	BE170371.1	EST_HUMAN	to89a01.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2185416 3' similar to contains Alu
142	12807	25295	13.71	1.0E-26	BE170371.1	EST_HUMAN	repetitive element/contains element MER20 MER20 repetitive element ;
2091	14671	27241	1.5	1.0E-26	AL039363.2	EST_HUMAN	Homo sapiens MHC class 1 region
2598	15160	27728	1.48	1.0E-26	BE814965.1	EST_HUMAN	Homo sapiens mRNA for KIAA1438 protein, partial cds
2710	15287		6.31	1.0E-26	AF261085.1	NT	Homo sapiens chromosome 12 open reading frame 3 (C12ORF3), mRNA
6927	19586		2.52	1.0E-26	BE165980.1	EST_HUMAN	QV4-HT0538-020300-123-a02 HT0538 Homo sapiens cDNA
							DKFZp434H1910_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434H1910 5'
							MR2-BN0114-240500-030-g07 BN0114 Homo sapiens cDNA
							Homo sapiens glyceraldehyde-3-phosphate dehydrogenase (GADPH) mRNA, complete cds
							MR3-HT0487-150200-113-g01 HT0487 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10772	23286		2.98	1.0E-28	AL038487.1	EST_HUMAN	DKFZp566C2146_r1 588 (synonym: hfxd2) Homo sapiens cDNA clone DKFZp566C2146 5'
12151	25084		2.78	1.0E-28	H55083.1	EST_HUMAN	CHR220032 Chromosome 22 exon Homo sapiens cDNA clone C22_45 5'
12825	24703		1.27	1.0E-28	AW 408742.1	EST_HUMAN	UI-HF-BMO-adv-3-10-0-UI_r1 NIH_MGC 38 Homo sapiens cDNA clone IMAGE:3063210 5'
7584	20089		1.17	9.0E-27	BF371227.1	EST_HUMAN	RC8-FN0138-110800-022-A02 FN0138 Homo sapiens cDNA
9227	21949		4	9.0E-27	U93163.1	NT	Homo sapiens MAGE-B2 (MAGE-B2), MAGE-B3 (MAGE-B3), MAGE-B4 (MAGE-B4), and MAGE-B1 (MAGE-B1) genes, complete cds
11848	24080		6.15	9.0E-27	BF445558.1	EST_HUMAN	naa03c07.x1 NCI_CGAP_P128 Homo sapiens cDNA clone IMAGE:3253844 3' similar to contains OFR.11 OFR repetitive element:
11	12690	25146	3.07	8.0E-27	AI831482.1	EST_HUMAN	w49c04.x1 NCI_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2406150 3' similar to contains THIR.b2 THR repetitive element:
583	13213		3.36	8.0E-27	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
1461	14053	26585	28.2	8.0E-27	AW162737.1	EST_HUMAN	au87n08.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2783295 3' similar to gb:K00558 TUBULIN ALPHA-1 CHAIN (HUMAN);
1461	14053	26586	28.2	8.0E-27	AW162737.1	EST_HUMAN	au87n08.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2783295 3' similar to gb:K00558 TUBULIN ALPHA-1 CHAIN (HUMAN);
2212	14787	27362	1.48	8.0E-27	AW864776.1	EST_HUMAN	PM2-SN0018-220300-002-a07 SN0018 Homo sapiens cDNA
3219	15831	28310	1.89	8.0E-27	P12236	SWISSPROT	ADP.ATP CARRIER PROTEIN, LIVER ISOFORM T2 (ADP/ATP TRANSLOCASE 3) (ADENINE NUCLEOTIDE TRANSLOCATOR 3) (ANT 3)
3396	16004	28485	0.59	8.0E-27	AF181897.1	NT	Homo sapiens WRN (WRN) gene, complete cds
5873	18495	31221	1.14	8.0E-27	AV732214.1	EST_HUMAN	AV732214 HTF Homo sapiens cDNA clone HTFBCB08 5'
7054	18073		2.9	8.0E-27	BE926560.1	EST_HUMAN	MR4-B10398-250800-204-d08 BT0398 Homo sapiens cDNA
7111	18451	32287	2.49	8.0E-27	N84970.1	EST_HUMAN	J1751F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone J1751 5' similar to REPETITIVE ELEMENT L1
9136	21671	34613	1.35	8.0E-27	AW857579.1	EST_HUMAN	CM1-CT0315-081289-063-d07 CT0315 Homo sapiens cDNA
9136	21671	34614	1.35	8.0E-27	AW857579.1	EST_HUMAN	CM1-CT0315-081289-063-d07 CT0315 Homo sapiens cDNA
712	13333		1.39	7.0E-27	Z70694.1	NT	Human endogenous retroviral element HC2
5252	17815		2.66	7.0E-27	AW628172.1	EST_HUMAN	hi51h12.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2975879 3' similar to TR:O76040
8791	21330		0.77	7.0E-27	D86984.1	NT	Human mRNA for KIAA0231 gene, partial cds
10628	23160		4.39	7.0E-27	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region, segment 1/2
12298	24495		3.27	7.0E-27	AV723365.1	EST_HUMAN	AV723365 HTB Homo sapiens cDNA clone HTBAHE02 5'
10605	23139	36151	11.92	6.0E-27	M26697.1	NT	Human nucleolar protein (B23) mRNA, complete cds
11621	24063	37127	2.33	6.0E-27	U93163.1	NT	Homo sapiens MAGE-B2 (MAGE-B2), MAGE-B3 (MAGE-B3), MAGE-B4 (MAGE-B4), and MAGE-B1 (MAGE-B1) genes, complete cds

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Table 4

Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7752	20260		0.79	5.0E-27	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
10138	22631	35619	2.86	5.0E-27	BF666614.1	EST_HUMAN	602121491F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4278527 5'
10136	22631	35620	2.86	5.0E-27	BF666614.1	EST_HUMAN	602121491F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4278527 5'
2423	14991	27564	4.86	4.0E-27	D25303.1	NT	Human mRNA for integrin alpha subunit, complete cds
6842	19432	32247	1.37	4.0E-27	9910569	NT	Mus musculus sperm tail associated protein (Stap), mRNA
7880	20422		1.14	4.0E-27	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
7925	20467		1.22	4.0E-27	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
9659	22158	35130	0.8	4.0E-27	AW680659.1	EST_HUMAN	QV0-OT0033-070300-152-b10 OT0033 Homo sapiens cDNA
11473	23923	36993	2.38	4.0E-27	X89211.1	NT	H. sapiens DNA for endogenous retroviral like element
2085	14666	27237	6.19	3.0E-27	X60658.1	NT	R. rattus RYA3 mRNA for a potential ligand-binding protein
4358	16945	29387	1.56	3.0E-27	BE071924.1	EST_HUMAN	PMO-BT0527-080100-001-d11 BT0527 Homo sapiens cDNA
5549	18181	30598	6.22	3.0E-27	AA077705.1	EST_HUMAN	7B44C08 Chromosome 7 Fetal Brain cDNA Library Homo sapiens cDNA clone 7B44C08
9229	21951	34900	3.67	3.0E-27	BF035327.1	EST_HUMAN	601458531F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862088 5'
45	12724	25185	29.69	2.0E-27	AF054187.1	NT	Homo sapiens alpha NAC mRNA, complete cds
1940	14524		12.18	2.0E-27	AA565345.1	EST_HUMAN	nk01b10.s1 NCI_CGAP_Py11 Homo sapiens cDNA clone IMAGE:1000699 similar to gb:M17886.60S
3143	15757		12.54	2.0E-27	AW629172.1	EST_HUMAN	ACIDIC RIBOSOMAL PROTEIN P1 (HUMAN); hi5h12.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2975879 3' similar to TR:076040 O76040 ORF2: FUNCTION UNKNOWN. ;
3261	15873	28353	1.74	2.0E-27	AF111167.2	NT	Homo sapiens jun dimerization protein gene, partial cds; cfos gene, complete cds; and unknown gene
3261	15873	28354	1.74	2.0E-27	AF111167.2	NT	Homo sapiens jun dimerization protein gene, partial cds; cfos gene, complete cds; and unknown gene
6779	19370	32185	0.88	2.0E-27	H02855.1	EST_HUMAN	y36601.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:150840 5' similar to
8034	20576	33481	1.24	2.0E-27	AI866347.1	EST_HUMAN	SP:HMGC_MOUSE Q02591 HOMEBOX PROTEIN ;
9183	21710		2.25	2.0E-27	AA551527.1	EST_HUMAN	w28g07.x1 NCI_CGAP_U11 Homo sapiens cDNA clone IMAGE:2426268 3'
9707	22205	35178	1	2.0E-27	X60658.1	NT	nh08h05.s1 NCI_CGAP_Thy1 Homo sapiens cDNA clone IMAGE:943737 similar to contains L1.13 L1 repetitive element ;
9948	22443	35421	1.03	2.0E-27	M78590.1	EST_HUMAN	R. rattus RYA3 mRNA for a potential ligand-binding protein
9948	22443	35422	1.03	2.0E-27	M78590.1	EST_HUMAN	EST00738 Fetal brain, Stratagene (cat#936206) Homo sapiens cDNA clone HFBCF07
10834	23355	36370	3.38	2.0E-27	AU121685.1	EST_HUMAN	EST00738 Fetal brain, Stratagene (cat#936206) Homo sapiens cDNA clone HFBCF07
11360	14524		15.86	2.0E-27	AA565345.1	EST_HUMAN	AU121685 MAMMA1 Homo sapiens cDNA clone MAMMA1000746 5'
461	13095		1.17	1.0E-27	AL163246.2	NT	nk01b10.s1 NCI_CGAP_Py11 Homo sapiens cDNA clone IMAGE:1000699 similar to gb:M17886.60S ACIDIC RIBOSOMAL PROTEIN P1 (HUMAN);
							Homo sapiens chromosome 21 segment HS21C046



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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1034	13644	28157	1.25	1.0E-27	AB028898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
4155	16747		1.02	1.0E-27	BE350127.1	EST_HUMAN	h09g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3148256 3' similar to contains MER28.b3
6665	19261	32065	6.88	1.0E-27	6005855	NT	MER29 repetitive element ;
6952	19529	32353	1.86	1.0E-27	F30158.1	EST_HUMAN	Homo sapiens Retina-derived POU-domain factor-1 (RPF-1), mRNA
6952	19529	32354	1.86	1.0E-27	F30158.1	EST_HUMAN	HSPD20461 HM3 Homo sapiens cDNA clone s4000095C10
8546	21085	34008	0.7	1.0E-27	AB007923.1	NT	HSPD20461 HM3 Homo sapiens cDNA clone s4000095C10
8916	21454		1.89	1.0E-27	BE079780.1	EST_HUMAN	Homo sapiens mRNA for KIAA0454 protein, partial cds
9638	22138	35104	2.68	1.0E-27	D87449.1	NT	RC6-BT0627-140200-011-E08 BT0827 Homo sapiens cDNA
11551	23899	37071	3.65	1.0E-27	AF111093.1	NT	Human mRNA for KIAA0260 gene, partial cds
148	12810		2.02	9.0E-28	BE348389.1	EST_HUMAN	Bos taurus latrophilin 3 splice variant bbaa mRNA, complete cds
333	12885	25472	2.19	9.0E-28	AU126260.1	EST_HUMAN	hw17c11.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3183188 3' similar to TR:Q07314 Q07314
11732	24137		4.71	9.0E-28	BF377859.1	EST_HUMAN	SECRETED NEUREXIN II-ALPHA-C PRECURSOR. [3] TR:Q07280 TR:Q07313 ;
12066	24923		4.41	8.0E-28	AW157571.1	EST_HUMAN	AU126260 NT2RP1 Homo sapiens cDNA clone NT2RP1000443 5'
1223	13823	26338	16.9	7.0E-28	AU142750.1	EST_HUMAN	CM2-TN0140-070900-372-g01 TN0140 Homo sapiens cDNA
11066	23578	36618	3.08	7.0E-28	11417866	NT	au83h08.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782911 3' similar to
11688	24104		2.37	7.0E-28	AV753348.1	EST_HUMAN	TR:060302 O80302 KIAA0555 PROTEIN. ; contains element MER22 repetitive element ;
8850	21389		1.04	8.0E-28	AF016052.1	NT	AU142750 Y79AA1 Homo sapiens cDNA clone Y79AA1000824 5'
12346	24527		12.5	6.0E-28	AA504562.1	EST_HUMAN	Homo sapiens gamma-glutamyltransferase-like activity 1 (GGTLA1), mRNA
340	12992		2.28	5.0E-28	A1921003.1	EST_HUMAN	AV753348 CB Homo sapiens cDNA clone CBFAKA12 5'
4081	16677	29137	1.79	5.0E-28	R79782.1	EST_HUMAN	Homo sapiens zinc finger protein ZNF191 (ZNF191) gene, complete cds
2654	15213	27786	1.12	4.0E-28	AW195066.1	EST_HUMAN	sa60603.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:825340 5' similar to contains Alu
3005	15621	28098	0.76	4.0E-28	4505316	NT	repetitive element; contains element PTRS repetitive element ;
3142	15756	28223	3.13	4.0E-28	BE409100.1	EST_HUMAN	wo18c07.x1 NCI_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2455692 3' similar to contains THR.b1
7368	19894	32757	1.79	4.0E-28	A1198941.1	EST_HUMAN	THR repetitive element ;
10745	23289		4.9	4.0E-28	AF029308.1	NT	y89f10.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:148443 5'
							xn33c09.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2695504 3' similar to SW:GG95_HUMAN
							Q08379 GOLGIN-95 ;
							Homo sapiens myosin phosphatase, target subunit 1 (MYPT1), mRNA
							501300703F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635305 5'
							qf66f10.x1 Soares testis.NHT Homo sapiens cDNA clone IMAGE:1755019 3' similar to gb:M19503 LINE-1
							REVERSE TRANSCRIPTASE HOMOLOG (HUMAN);
							Homo sapiens chromosome 9 duplication of the T cell receptor beta locus and brysinogen gene families

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10885	23406		25.24	4.0E-28	AB038241.1	NT	Felis catus GAPDH mRNA for glyceraldehyde-3-phosphate dehydrogenase, complete cds
10904	19894	32757	3.33	4.0E-28	AI198941.1	EST_HUMAN	qf6810.x1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1755019 3' similar to gb:M19503 LINE-1 REVERSE TRANSCRIPTASE HOMOLOG (HUMAN);
12116	24375		1.71	4.0E-28	AW854244.1	EST_HUMAN	RC3-CT0254-240400-210-112 CT0254 Homo sapiens cDNA
12657	24728		72.51	4.0E-28	AW157571.1	EST_HUMAN	au83108.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782911 3' similar to TR:O60302 O60302 KIAA0555 PROTEIN, contains element MER22 repetitive element; Homo sapiens metalloprotease-like, disintegrin-like, cysteine-rich protein 2 epsilon (ADAM22) mRNA, complete cds
1326	13920		1.95	3.0E-28	AF155382.1	NT	MR3-HT0713-280500-013-709 HT0713 Homo sapiens cDNA
8761	21300	34221	3.77	3.0E-28	BF554030.1	EST_HUMAN	Homo sapiens MHC class 1 region
10815	23336	36349	2.08	3.0E-28	U53588.1	NT	wj86f07.x1 NCI_CGAP_Lym12 Homo sapiens cDNA clone IMAGE:2410885 3' similar to contains Alu repetitive element/contains element HGR repetitive element;
12147	24390		2.53	3.0E-28	AB31991.1	EST_HUMAN	RC2-BT0642-210200-013-03 BT0642 Homo sapiens cDNA
12284	24488		1.77	3.0E-28	BE082801.1	EST_HUMAN	RC1-BT0254-220300-019-c05 BT0254 Homo sapiens cDNA
92	12768	25251	8.71	2.0E-28	BE062167.1	EST_HUMAN	Homo sapiens ITGB4 gene for integrin beta 4 subunit, exons 3-41
1207	13807	26320	9.63	2.0E-28	Y11107.3	NT	qp35b06.x1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1910483 3' similar to contains L1.b2 L1 repetitive element;
2517	15081	27654	2.47	2.0E-28	AI348834.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C009
3407	16016	28495	0.64	2.0E-28	AL163209.2	NT	hr76c03.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3134404 3' similar to contains LOR1.b1 LOR1 repetitive element;
6449	19050	31836	1.2	2.0E-28	BF224402.1	EST_HUMAN	601814196F1 NIH_MGC_S4 Homo sapiens cDNA clone IMAGE:4048751 5'
6472	19073		5.22	2.0E-28	BF212805.1	EST_HUMAN	Sus scrofa domestica submaxillary apomucin mRNA, complete cds
7988	20530	33437	0.77	2.0E-28	AF005273.1	NT	EST394394 MAGE resequences, MAGL Homo sapiens cDNA
9505	22005		11	2.0E-28	AW972305.1	EST_HUMAN	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
11481	23931	37002	1.91	2.0E-28	AF224669.1	NT	y79c08.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:44300 5'
12127	24383		1.74	2.0E-28	H06376.1	EST_HUMAN	Human gene for Ah-receptor, exon 7-9
1526	14118	26655	3.52	1.0E-28	D38044.1	NT	QV1-BT0821-120900-360-b03 BT0821 Homo sapiens cDNA
2261	14835	27413	1.64	1.0E-28	BF333236.1	EST_HUMAN	Homo sapiens ubiquitous TPR motif, Y isoform (UTY) mRNA, alternative transcript 2, complete cds
2708	15265	27632	1.38	1.0E-28	AF000995.1	NT	Human zinc finger protein ZNF131 mRNA, partial cds
4688	17250		0.96	1.0E-28	U09410.1	NT	Homo sapiens similar to ribosomal protein L12 (H. sapiens) (LOC63081), mRNA
7801	20344		7.69	1.0E-28	11429885	NT	Homo sapiens hypothetical protein FLJ10988 (FLJ10988), mRNA
7961	20503		3.2	1.0E-28	8922793	NT	EST179615 HCC cell line (metastasis to liver in mouse)    Homo sapiens cDNA 5' end similar to similar to retroviral LTR
9202	21719	34663	4.72	1.0E-28	AA308744.1	EST_HUMAN	

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9790	22288	35272	9.67	1.0E-28	4758431	NT	Homo sapiens gamma-glutamyltransferase-like activity 1 (GGTLA1), mRNA
9790	22288	35273	9.67	1.0E-28	4758431	NT	Homo sapiens gamma-glutamyltransferase-like activity 1 (GGTLA1), mRNA
11893	24108		10.45	1.0E-28	AA054182.1	EST_HUMAN	zf51c01.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:380448 5'
12484	24811		1.56	1.0E-28	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
12596	25034	30502	3.5	9.0E-29	AW663987.1	EST_HUMAN	hi76q06.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2978268 3'
12245	24456		5.36	8.0E-29	Q00130	SWISSPROT	HYPOTHETICAL GENE 50 PROTEIN
1846	14238	26773	1.04	7.0E-29	AW966447.1	EST_HUMAN	EST378521 IMAGE resequences, MAGI Homo sapiens cDNA
3607	16211		0.91	7.0E-29	BE254708.1	EST_HUMAN	601114990F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3355387 5'
12644	24718		13.85	7.0E-29	AJ132352.1	NT	Rattus norvegicus mRNA for 45 kDa secretory protein, partial
621	13248	25722	7.35	8.0E-29	AI936748.1	EST_HUMAN	wp69b01.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2466985 3' similar to TR:O15475
12002	24307		9.29	6.0E-29	BE940436.1	EST_HUMAN	O15475 UNNAMED HERV-H PROTEIN ; contains LTR7.b1 LTR7 repetitive element ;
5138	17710		1.02	5.0E-29	AL163203.2	NT	RC3-UT0082-210800-021-c05 UT0082 Homo sapiens cDNA
8668	21205		7.83	5.0E-29	AW887541.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C003
12276	24490		1.32	5.0E-29	BE612449.1	EST_HUMAN	RC3-OT0091-170300-011-c12 OT0091 Homo sapiens cDNA
3269	15881		2.92	4.0E-29	AI752367.1	EST_HUMAN	601451827F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3855726 5'
6160	18773		6.52	4.0E-29	BE184930.1	EST_HUMAN	cn15c02.x1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBC_cn15c02 random
8025	20567	33469	0.92	4.0E-29	AI678101.1	EST_HUMAN	QV1-HT0471-280300-121-a05 HT0471 Homo sapiens cDNA
8025	20567	33470	0.92	4.0E-29	AI678101.1	EST_HUMAN	wd35g06.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2330170 3' similar to contains MER29.l2 MER29 repetitive element ;
8680	21219	34139	6.03	4.0E-29	JO4888.1	NT	wd35g06.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2330170 3' similar to contains
4506	17090	29538	1.58	3.0E-29	AB042297.1	NT	Human 90 kD heat shock protein gene, complete cds
4839	17417	29870	1.28	3.0E-29	BF333236.1	EST_HUMAN	Homo sapiens PTS gene for 6-pyruvoyltransferase synthase, complete cds
6088	18704	31452	0.88	3.0E-29	BE314018.1	EST_HUMAN	QV1-BT0821-120900-360-b03 BT0821 Homo sapiens cDNA
8668	21207	34124	2.6	3.0E-29	D38044.1	NT	601152857F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3508527 5'
9224	21740	34683	1.93	3.0E-29	AW303317.1	EST_HUMAN	Human gene for Ah-receptor, exon 7-9
9450	21978		2.01	3.0E-28	AL163246.2	NT	xv17f03.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2813405 3' similar to contains Alu repetitive element; contains MER19.l2 MER19 repetitive element ;
9869	22366		0.76	3.0E-29	BE350127.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C046
11148	23656	36698	1.88	3.0E-29	AA403053.1	EST_HUMAN	hi08g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3148256 3' similar to contains MER29.b3
							z62b01.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:726889 5' similar to TR:G1335769
							G1335769 GAG-POLYPROTEIN. ;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11891	24234		2.61	3.0E-29	D63882.1	NT	Human HsLIM15 mRNA for HsLIM15, complete cds
12553	25044		1.95	3.0E-29	D63882.1	NT	Human HsLIM15 mRNA for HsLIM15, complete cds
518	13150	25632	1.07	2.0E-29	AF084869.1	NT	Homo sapiens envelope protein RIC-6 (env) gene, complete cds
518	13150	25633	1.07	2.0E-29	AF084869.1	NT	Homo sapiens envelope protein RIC-6 (env) gene, complete cds
1580	14173	26703	7.26	2.0E-29	AI963804.1	EST_HUMAN	wf65d10.x1 NCL CGAP_U11 Homo sapiens cDNA clone IMAGE:2492563 3' similar to TR:O15548 O15546 HERV-E ENVELOPE GLYCOPROTEIN ;
1580	14173	26704	7.26	2.0E-29	AI963804.1	EST_HUMAN	wf65d10.x1 NCL CGAP_U11 Homo sapiens cDNA clone IMAGE:2492563 3' similar to TR:O15548 O15549 HERV-E ENVELOPE GLYCOPROTEIN ;
4366	18953	29393	2.01	2.0E-29	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C068
5891	18611	31346	0.86	2.0E-29	AI082459.1	EST_HUMAN	os71e04.x1 NCL CGAP_GC2 Homo sapiens cDNA clone IMAGE:1610814 3' similar to contains L1.12 L1 repetitive element ;
6327	18933	31708	1.45	2.0E-29	AI806418.1	EST_HUMAN	wf27g07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2356860 3' similar to contains element MER6 repetitive element ;
7560	18933	31708	1.2	2.0E-29	AI806418.1	EST_HUMAN	wf27g07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2356860 3' similar to contains element MER6 repetitive element ;
7917	20459	33368	1.15	2.0E-29	BE867157.1	EST_HUMAN	601442206F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3846648 5'
8514	21053	33975	0.55	2.0E-29	10567821	NT	Homo sapiens DNA-binding protein (LOC56242), mRNA
8514	21053	33978	0.55	2.0E-29	10567821	NT	Homo sapiens DNA-binding protein (LOC56242), mRNA
9427	21936	34884	3.74	2.0E-29	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
9427	21936	34885	3.74	2.0E-29	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
10138	22633	35622	3.15	2.0E-29	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
10138	22633	35623	3.15	2.0E-29	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
11350	23805		2.03	2.0E-29	11425108	NT	Homo sapiens splicing factor similar to dnaj (SPF31), mRNA
11360	23842		2.46	2.0E-29	AW880701.1	EST_HUMAN	QV0-OT0032-080300-155-d01 OT0032 Homo sapiens cDNA
11635	24075		1.93	2.0E-29	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
8727	21266	34186	7.44	1.0E-29	AW983880.1	EST_HUMAN	RC1-HN0003-220300-021-b04 HN0003 Homo sapiens cDNA
10503	22997	36006	0.75	1.0E-29	X60658.1	NT	R. rattus RYA3 mRNA for a potential ligand-binding protein nz20c07.s1 NCL CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1288332 3' similar to contains MER4.b1 MER4 repetitive element ;
6696	19292	32096	3.08	9.0E-30	AA761215.1	EST_HUMAN	nz20c07.s1 NCL CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1288332 3' similar to contains MER4.b1 MER4 repetitive element ;
11773	24162		2.08	9.0E-30	11422745	NT	Homo sapiens zinc finger regulated transporter-like (ZIRTL), mRNA
6461	19062		9.33	8.0E-30	F08688.1	EST_HUMAN	HSC23F051 normalized infant brain cDNA Homo sapiens cDNA clone c-23f05
8214	20755	33669	2.65	8.0E-30	AA338373.1	EST_HUMAN	EST97317 Thymus I Homo sapiens cDNA 5' end similar to EST containing O family repeat
8617	21156	34069	4.84	8.0E-30	AI557072.1	EST_HUMAN	PT2.1.13_B11.7 tumor2 Homo sapiens cDNA 3'
1562	14154		0.91	7.0E-30	BE091133.1	EST_HUMAN	PM4-BT0724-150400-004-d11 BT0724 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed In Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7779	20291	33190	1.28	7.0E-30	BF053327.1	EST_HUMAN	601458531F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3882086 5'
1810	14400	26945	1.35	6.0E-30	D25303.1	NT	Human mRNA for integrin alpha subunit, complete cds
3224	15836	28314	2.38	6.0E-30	BE008026.1	EST_HUMAN	QV0-BN0147-280400-214-f12 BN0147 Homo sapiens cDNA
4872	15836	28314	1.1	6.0E-30	BE008026.1	EST_HUMAN	QV0-BN0147-280400-214-f12 BN0147 Homo sapiens cDNA
10432	22826	35932	0.72	6.0E-30	AF177227.1	NT	Homo sapiens C10L tumor antigen sc20-10 mRNA, partial cds
12615	18024		1.6	6.0E-30	X51755.1	NT	Human lambda-immunoglobulin constant region complex (germline)
4085	16881	28141	39.51	5.0E-30	AI399992.1	EST_HUMAN	ig2g03.x1 NCL_CGAP_CELL1 Homo sapiens cDNA clone IMAGE:2116276 3' similar to contains Alu repetitive element
5448	24850		4.03	5.0E-30	U87031.1	NT	Human aconitase hydratase (ACO2) gene, exon 7
10767	23281		3.31	5.0E-30	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
11034	23548	36583	6.29	5.0E-30	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
11034	23548	36584	6.29	5.0E-30	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
2188	14764	27333	1.32	4.0E-30	AW937471.1	EST_HUMAN	QV3-DT0043-090200-080-c06 DT0043 Homo sapiens cDNA
2188	14764	27334	1.32	4.0E-30	AW937471.1	EST_HUMAN	QV3-DT0043-090200-080-c06 DT0043 Homo sapiens cDNA
8636	21375	34289	3.16	4.0E-30	AW812488.1	EST_HUMAN	GM1-ST0181-091199-035-f08 ST0181 Homo sapiens cDNA
1191	13792		3.43	3.0E-30	AI338551.1	EST_HUMAN	qq83c05.x1 Soares total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:1938920 3' similar to contains MER29 repetitive element
3821	18421	28883	0.87	3.0E-30	AF128893.1	NT	Homo sapiens telomerase reverse transcriptase (TERT) gene, exons 1-6
7883	20435		0.47	3.0E-30	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
8423	20863		0.5	3.0E-30	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
10330	22824	35920		3.0E-30	BE350127.1	EST_HUMAN	ht08g01.x1 NCL_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29 repetitive element
10460	22854	35964	1.69	3.0E-30	AB032968.1	NT	MER29 repetitive element
10460	22854	35965	0.53	3.0E-30	AB032968.1	NT	Homo sapiens mRNA for KIAA1143 protein, partial cds
11084	23596	36632	1.78	3.0E-30	P34056	SWISSPROT	Homo sapiens Y-linked zinc finger protein (ZFY) gene, complete cds
703	13324	25811	1.3	2.0E-30	AW857315.1	EST_HUMAN	TRANSCRIPTION FACTOR AP-2
1123	13726		2.35	2.0E-30	F08888.1	EST_HUMAN	CMO-CT0307-310100-158-H03 CT0307 Homo sapiens cDNA
1527	14119	26856	7.23	2.0E-30	BE175877.1	EST_HUMAN	HSC23F051 normalized infant brain cDNA Homo sapiens cDNA clone c-23f05
2444	15560	28034	9.08	2.0E-30	BE765232.1	EST_HUMAN	RCS-HT0582-110400-013-H08 HT0582 Homo sapiens cDNA
3857	16455	28919	6.74	2.0E-30	AF114156.1	NT	IL2NT0101-280700-118-E04 NT0101 Homo sapiens cDNA
4892	17467	29822	2.18	2.0E-30	AW205581.1	EST_HUMAN	Homo sapiens Y-linked zinc finger protein (ZFY) gene, complete cds
4892	17467	29823	2.07	2.0E-30	BE298945.1	EST_HUMAN	UI-H-BT1-af0-c-12-0-UI.s1 NCL_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2722558 3'
6855	19443	32259	2.07	2.0E-30	BE298945.1	EST_HUMAN	601119860F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3029438 5'
			0.92	2.0E-30	BF306337.1	EST_HUMAN	601119860F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3029438 5'
							601893208F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4138693 5'

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8412	20852	33871	0.81	2.0E-30	AA019103.1	EST_HUMAN	ze58c10.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:363186 5'
8474	21014	33830	5.83	2.0E-30	C18939.1	EST_HUMAN	C18939 Human placenta cDNA (Tfujwara) Homo sapiens cDNA clone GEN-570C01 5'
8570	21109	34027	3.55	2.0E-30	BE670617.1	EST_HUMAN	7e37c12.x1 NCI CGAP Lu24 Homo sapiens cDNA clone IMAGE:3284662 3' similar to SW:DHSA_HUMAN P31040 SUCCINATE DEHYDROGENASE [UBIQUINONE] FLAVOPROTEIN SUBUNIT PRECURSOR ;
8570	21109	34028	3.55	2.0E-30	BE670617.1	EST_HUMAN	7e37c12.x1 NCI CGAP Lu24 Homo sapiens cDNA clone IMAGE:3284662 3' similar to SW:DHSA_HUMAN P31040 SUCCINATE DEHYDROGENASE [UBIQUINONE] FLAVOPROTEIN SUBUNIT PRECURSOR ;
9908	22405	35380	3.21	2.0E-30	AW971568.1	EST_HUMAN	EST1383657 MAGE resequences, MAGL Homo sapiens cDNA
9994	22489	35477	6.11	2.0E-30	AW470791.1	EST_HUMAN	ha33d06.x1 NCI CGAP Kid12 Homo sapiens cDNA clone IMAGE:2875489 3' similar to contains THR.b3 THR repetitive element ;
308	12963	25452	12.31	1.0E-30	C18939.1	EST_HUMAN	C18939 Human placenta cDNA (Tfujwara) Homo sapiens cDNA clone GEN-570C01 5'
563	13194	25673	3.84	1.0E-30	AW468897.1	EST_HUMAN	hd30b04.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2910891 3' similar to contains MER1.G3 MER1 MER1 repetitive element ;
745	13365	25859	2.7	1.0E-30	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
2253	14827	27403	3.59	1.0E-30	AA664377.1	EST_HUMAN	ac77b08.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:868589 3'
2502	15066	27640	1.64	1.0E-30	BF347728.1	EST_HUMAN	602022560F1 NCI CGAP Brn67 Homo sapiens cDNA clone IMAGE:4157891 5'
3035	15651	28129	1.36	1.0E-30	5803091	NT	Homo sapiens methionine aminopeptidase; eIF-2-associated p67 (MNPEP), mRNA
3080	15705	28177	1.06	1.0E-30	AA315045.1	EST_HUMAN	EST186968 HCC cell line (metastasis to liver in mouse) II Homo sapiens cDNA 5' end
7708	20217	33105	16.59	1.0E-30	BF183230.1	EST_HUMAN	601803932F1 NIH_MGC_18 Homo sapiens cDNA clone IMAGE:4040694 5'
12268	25029		1.48	1.0E-30	AA289211.1	EST_HUMAN	EST11698 Uterus Homo sapiens cDNA 5' end
12411	24949		8.63	1.0E-30	H55593.1	EST_HUMAN	CHR220532 Chromosome 22 exon Homo sapiens cDNA clone C22_728 5'
3829	16429	28890	0.72	9.0E-31	T73025.1	EST_HUMAN	yc65e06.r1 Stratagene liver (#937224) Homo sapiens cDNA clone IMAGE:85570 5'
3829	16429	28891	0.72	9.0E-31	T73025.1	EST_HUMAN	yc65e06.r1 Stratagene liver (#937224) Homo sapiens cDNA clone IMAGE:85570 5'
8266	20807	33725	1.03	9.0E-31	R18214.1	EST_HUMAN	y98008.r1 Soares infant brain INIB Homo sapiens cDNA clone IMAGE:30568 5' similar to gb:X12953 RAS-RELATED PROTEIN RAB-2 (HUMAN);
8266	20807	33726	1.03	9.0E-31	R18214.1	EST_HUMAN	y98008.r1 Soares infant brain INIB Homo sapiens cDNA clone IMAGE:30568 5' similar to gb:X12953 RAS-RELATED PROTEIN RAB-2 (HUMAN);
8559	21098		1.84	9.0E-31	Z38293.1	EST_HUMAN	HSC06F032 normalized infant brain cDNA Homo sapiens cDNA clone c-05f03 3'
8561	21100	34020	0.52	9.0E-31	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
12840	24715	30867	1.89	9.0E-31	6755441	NT	Mus musculus syndecan 4 (Sdc4), mRNA
1115	13719	26230	6.84	8.0E-31	8923389	NT	Homo sapiens hypothetical protein FLJ20420 (FLJ20420), mRNA
2457	15024		4.22	8.0E-31	AL163208.2	NT	Homo sapiens chromosome 21 segment HS21C008
11801	24910		2.71	8.0E-31	AF012385.1	EST_HUMAN	AF012385 Human testis (C. De Smet) Homo sapiens cDNA clone TDP3.12b

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
740	13360		2.5	7.0E-31	AA372637.1	EST_HUMAN	EST84555 Cdon adenocarcinoma IV Homo sapiens cDNA 5' end
2692	15249	27818	2.37	7.0E-31	BE326517.1	EST_HUMAN	hw05a11.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3182012 3'
2692	15249	27819	2.37	7.0E-31	BE326517.1	EST_HUMAN	hw05a11.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3182012 3'
8340	20881	33800	0.82	7.0E-31	AF208541.1	NT	Homo sapiens V1-vascular vasopressin receptor AVPR1A gene, promoter region and partial cds
8340	20881	33801	0.82	7.0E-31	AF208541.1	NT	Homo sapiens V1-vascular vasopressin receptor AVPR1A gene, promoter region and partial cds
9180	21707		1.62	7.0E-31	BE408611.1	EST_HUMAN	601304125F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3838310 5'
12243	24455	30958	1.53	7.0E-31	X51755.1	NT	Human lambda-immunoglobulin constant region complex (germline)
3742	16343		2.28	6.0E-31	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
8094	20635		6.98	6.0E-31	AF055066.1	NT	Homo sapiens MHC class 1 region
8273	20814	33736	0.78	6.0E-31	BE350127.1	EST_HUMAN	hw08g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3148256 3' similar to contains MER28 b3
10617	23149	36161	1.69	6.0E-31	AU119105.1	EST_HUMAN	MER28 repetitive element;
11835	24199	31038	3.25	6.0E-31	AW372868.1	EST_HUMAN	AU119105 HEMBA1 Homo sapiens cDNA clone HEMBA1005050 5'
11984	24868		2	6.0E-31	BE894488.1	EST_HUMAN	RC5-BT0377-091289-031-D12 BT0377 Homo sapiens cDNA
206	12867	25352	3.89	5.0E-31	M60694.1	NT	601433087F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3918524 5'
206	12867	25353	3.89	5.0E-31	M60694.1	NT	Homo sapiens type I DNA topoisomerase gene, exon 8
8382	20922		0.75	5.0E-31	BF056540.1	EST_HUMAN	Homo sapiens type I DNA topoisomerase gene, exon 8
622	13249		2.67	4.0E-31	AJ271735.1	NT	7k06f04.x1 NCI_CGAP_G08 Homo sapiens cDNA clone IMAGE:3443478 3' similar to TR:Q13537 Q13537
1854	14442		2.42	4.0E-31	AL163280.2	NT	SIMILAR TO POGO ELEMENT; contains L1.1 L1 repetitive element;
2815	15387		1.02	4.0E-31	5730038	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
10427	22921	35924	0.65	4.0E-31	AF084464.1	NT	Homo sapiens chromosome 21 segment HS21C080
12006	24309		1.65	4.0E-31	AJ230125.1	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
12399	24559		1.51	4.0E-31	AB008881.1	NT	Rattus norvegicus GTP-binding protein REM2 (Rem2) mRNA, complete cds
7377	19803	32767	7.09	3.0E-31	4828853	NT	Homo sapiens gene for activin receptor type IIB, complete cds
7505	20027	32891	1.62	3.0E-31	11420329	NT	Homo sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 8 (19kD, ASH1) (NDUFB8) mRNA
8102	20643		2.18	3.0E-31	AL163206.2	NT	Homo sapiens hypothetical protein FLJ10842 (FLJ10842), mRNA
9500	22000	34957	14.68	3.0E-31	D14523.1	NT	Homo sapiens chromosome 21 segment HS21C006
10488	22982	35990	0.64	3.0E-31	AA421242.1	EST_HUMAN	Horse mRNA for ferritin L-chain, complete cds
10510	23048	36060	2.78	3.0E-31	P11174	SWISSPROT	zu06d04.r1 Soares_bstis NHT Homo sapiens cDNA clone IMAGE:731047 5'
11032	23546		6.94	3.0E-31	BF035327.1	EST_HUMAN	40S RIBOSOMAL PROTEIN S15 (RIG PROTEIN)
1881	14545	27102	1.52	2.0E-31	AW838171.1	EST_HUMAN	60145853F1 NIH_MGC_88 Homo sapiens cDNA clone IMAGE:3862086 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2255	14829	27405	1.16	2.0E-31	AI393388.1	EST_HUMAN	ig44g05.xt Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2111672 3'
2379	14948	27522	2.08	2.0E-31	AL119245.1	EST_HUMAN	DKFZ761G1513.1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761G1513 5'
2485	15050	27621	3.48	2.0E-31	AA458824.1	EST_HUMAN	aa88f11.s1 Stratagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:838413 3' similar to contains THR.12 THR repetitive element;
5479	18113	30522	0.81	2.0E-31	AW444496.1	EST_HUMAN	UI-H-B13-ekb-f-09-0-UI.s1 NCI_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:2733833 3'
5888	18511	31237	2.97	2.0E-31	BE350127.1	EST_HUMAN	h08901.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3148256 3' similar to contains MER29.b3 MER29 repetitive element;
9006	21543		2.32	2.0E-31	AA877764.1	EST_HUMAN	m06104.s1 NCI_CGAP_Co10 Homo sapiens cDNA clone IMAGE:1161055 3' similar to TR:Q13537 Q13537 MER37 TRANSPORTABLE ELEMENT, COMPLETE CONSENSUS SEQUENCE;
9134	21669	34611	3.65	2.0E-31	7661535	NT	Homo sapiens B9 protein (B9), mRNA
9820	22318	35301	1.04	2.0E-31	AV710948.1	EST_HUMAN	AV710948 Cu Homo sapiens cDNA clone CUAALB07 5'
9820	22318	35302	1.04	2.0E-31	AV710948.1	EST_HUMAN	AV710948 Cu Homo sapiens cDNA clone CUAALB07 5'
9887	22482	35467	1.73	2.0E-31	BE408611.1	EST_HUMAN	601304125F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3638310 5'
9987	22482	35468	1.73	2.0E-31	BE408611.1	EST_HUMAN	601304125F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3638310 5'
11834	24288		3.08	2.0E-31	AF148512.1	NT	Homo sapiens hexokinase II gene, promoter region
12078	25106		2.43	2.0E-31	AI114527.1	EST_HUMAN	HA1110 Human fetal liver cDNA library Homo sapiens cDNA
18	12697	25154	8.8	1.0E-31	U93163.1	NT	Homo sapiens MAGE-B2 (MAGE-B2), MAGE-B3 (MAGE-B3), MAGE-B4 (MAGE-B4), and MAGE-B1 (MAGE-B1) genes, complete cds
1703	14296	26831	3.28	1.0E-31	O95371	SWISSPROT	OLFACTORY RECEPTOR 2C1
1703	14296	26832	3.28	1.0E-31	O95371	SWISSPROT	OLFACTORY RECEPTOR 2C1
1703	14296	26833	3.28	1.0E-31	O95371	SWISSPROT	OLFACTORY RECEPTOR 2C1
4742	17323	29763	1.19	1.0E-31	AL134376.1	EST_HUMAN	DKFZp547B235.1 547 (synonym: h1br1) Homo sapiens cDNA clone DKFZp547B235 5'
4742	17323	29764	1.19	1.0E-31	AL134376.1	EST_HUMAN	DKFZp547B235.1 547 (synonym: h1br1) Homo sapiens cDNA clone DKFZp547B235 5'
5496	18130	30538	3.47	1.0E-31	AW331679.1	EST_HUMAN	MR3-ST0220-151299-028-a08.1 ST0220 Homo sapiens cDNA
6282	18890	31658	1.84	1.0E-31	AF048727.1	NT	Homo sapiens minisatellite ceb1 repeat region
7332	19859	32722	0.84	1.0E-31	AF126145.1	NT	Bos taurus xenobiotic/medium-chain fatty acid: CoA ligase form XL-III mRNA, nuclear mRNA encoding mitochondrial protein, complete cds
7772	20281	33178	0.68	1.0E-31	BE972818.1	EST_HUMAN	601652052F1 NIH_MGC_82 Homo sapiens cDNA clone IMAGE:3935293 5'
10135	22630	35618	0.67	1.0E-31	U93163.1	NT	Homo sapiens MAGE-B2 (MAGE-B2), MAGE-B3 (MAGE-B3), MAGE-B4 (MAGE-B4), and MAGE-B1 (MAGE-B1) genes, complete cds
10796	23319	36329	2.94	1.0E-31	AI086434.1	EST_HUMAN	q121h03.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:1750709 3' similar to TR:Q16595
6749	19342	32149	2.29	9.0E-32	AV723976.1	EST_HUMAN	Q16595 FRATAXIN;
7591	20106		1.07	9.0E-32	11430822	NT	AV723976 HTB Homo sapiens cDNA clone HTBAAG01 5'
							Homo sapiens hypothetical protein FLJ11294 (FLJ11294), mRNA



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2122	14700	27270	3.49	8.0E-32	AI056770.1	EST_HUMAN	oz15a08.x1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1675384 3'
5673	18300	30781	0.9	8.0E-32	AW997214.1	EST_HUMAN	RC2-BN0048-200300-015-404 BN0048 Homo sapiens cDNA
4985	17559	30002	3.69	7.0E-32	P52591	SWISSPROT	NUCLEAR ENVELOPE PORE MEMBRANE PROTEIN POM 121 (PORE MEMBRANE PROTEIN OF 121 KD) (P145)
11809	24247		3.42	7.0E-32	X17283.1	NT	Human chromosome 22 immunoglobulin V(K) gene, part. with 5' breakpoint between orphion and neighbouring non-amplified region
2759	15314	27880	0.91	6.0E-32	AI478104.1	EST_HUMAN	tm34a10.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2159984 3' similar to contains MER29.13
7402	19927		1.37	6.0E-32	BE888016.1	EST_HUMAN	MER29 repetitive element:
12350	25086		1.51	6.0E-32	AA894653.1	EST_HUMAN	601511530F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913087 5'
1072	13677	26187	75.63	5.0E-32	AF116627.1	NT	ch37c03.s1 NCL_CGAP_Kid8 Homo sapiens cDNA clone IMAGE:1459972 3' similar to contains L1.13 L1
988	13577		1.55	4.0E-32	AL163246.2	NT	repetitive element:
7599	20112	32987	3.11	4.0E-32	11432574	NT	Homo sapiens PRO1181 mRNA, complete cds
7599	20112	32988	3.11	4.0E-32	11432574	NT	Homo sapiens chromosome 21 segment HS21C046
8300	20841		0.77	4.0E-32	BE064410.1	EST_HUMAN	Homo sapiens AT-binding transcription factor 1 (ATBF1), mRNA
481	13114	25604	2.78	3.0E-32	Y17283.1	NT	Homo sapiens AT-binding transcription factor 1 (ATBF1), mRNA
1502	14094	26633	8.08	3.0E-32	AV731500.1	EST_HUMAN	RC4-BT0311-141199-011-h08 BT0311 Homo sapiens cDNA
2933	15549	28025	0.73	3.0E-32	5174574	NT	Homo sapiens FLK-1 gene, partial
2933	15549	28026	0.73	3.0E-32	5174574	NT	AV731500 HTF Homo sapiens cDNA clone HTFAKC07 5'
9315	21829	34780	16.81	3.0E-32	AV758634.1	EST_HUMAN	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (trithorax (Drosophila) homolog); translocated to, 4 (MLLT4) mRNA
9315	21829	34781	16.81	3.0E-32	AV758634.1	EST_HUMAN	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (trithorax (Drosophila) homolog); translocated to, 4 (MLLT4) mRNA
10805	23328	36339	7.7	3.0E-32	AA777821.1	EST_HUMAN	AV758634 BM Homo sapiens cDNA clone BMFBBH12 5'
11093	23605		1.63	3.0E-32	BF035327.1	EST_HUMAN	AV758634 BM Homo sapiens cDNA clone BMFBBH12 5'
11937	24270		6.37	3.0E-32	BE278088.1	EST_HUMAN	z95a07.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:448500 3' similar to contains THR13 THR repetitive element:
12325	15549	28025	6.26	3.0E-32	5174574	NT	601458531F1 NIH_MGC_86 Homo sapiens cDNA clone IMAGE:3862086 5'
12325	15549	28026	6.26	3.0E-32	5174574	NT	601158285F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3139701 5'
12491	24620		5.38	3.0E-32	BE278088.1	EST_HUMAN	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (trithorax (Drosophila) homolog); translocated to, 4 (MLLT4) mRNA
5011	17584	30027	1.01	2.0E-32	BE296613.1	EST_HUMAN	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (trithorax (Drosophila) homolog); translocated to, 4 (MLLT4) mRNA
							Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (trithorax (Drosophila) homolog); translocated to, 4 (MLLT4) mRNA
							601158285F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3139701 5'
							601173631F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3529159 5'

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Table 4  
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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6400	19003	31781	0.9	2.0E-32	M35418.1	NT	Human cell 12-lipoxygenase mRNA, complete cds
6605	19202	32007	5.69	2.0E-32	Z38133.1	NT	H. sapiens mRNA for myosin
6605	19202	32008	5.69	2.0E-32	Z38133.1	NT	H. sapiens mRNA for myosin
8220	20761	33676	2.06	2.0E-32	AA114294.1	EST_HUMAN	zn66c08.r1 Stratagene HeLa cell s3 937216 Homo sapiens cDNA clone IMAGE:563150 5'
8220	20761	33677	2.06	2.0E-32	AA114294.1	EST_HUMAN	zn66c08.r1 Stratagene HeLa cell s3 937216 Homo sapiens cDNA clone IMAGE:563150 5'
12610	24694	30859	1.41	2.0E-32	AV736449.1	EST_HUMAN	AV736449 CB Homo sapiens cDNA clone CBFBA08 5'
12610	24694	30860	1.41	2.0E-32	AV736449.1	EST_HUMAN	AV736449 CB Homo sapiens cDNA clone CBFBA08 5'
7115	19455	32271	6.86	1.0E-32	11439789	NT	Homo sapiens chromosome 11 open reading frame 9 (C11ORF9), mRNA
8532	21071	33991	4.86	1.0E-32	AA720574.1	EST_HUMAN	hw21g02.s1 NCI_CGAP_GCB0 Homo sapiens cDNA clone IMAGE:1241138 3' similar to contains THR.13 THR repetitive element
3527	16132		5.7	9.0E-33	BE32712.1	EST_HUMAN	hw07c05.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3182216 3' similar to TR:O88539 O88539 WW DOMAIN BINDING PROTEIN 11.
6552	19150		4.1	9.0E-33	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
8723	21262	34182	2.52	9.0E-33	BF347229.1	EST_HUMAN	602021194F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4156670 5'
10677	23209		6.39	9.0E-33	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
65	12744	25219	2.71	7.0E-33	5031736	NT	Homo sapiens short-chain alcohol dehydrogenase family member (HEP27) mRNA
65	12744	25220	2.71	7.0E-33	5031736	NT	Homo sapiens short-chain alcohol dehydrogenase family member (HEP27) mRNA
2206	14762	27355	1.92	7.0E-33	AI590115.1	EST_HUMAN	to12b08.x1 NCI_CGAP_U12 Homo sapiens cDNA clone IMAGE:2178809 3' similar to contains OFR.t1 OFR repetitive element
2675	15233		6.6	7.0E-33	AV730056.1	EST_HUMAN	AV730056 HTF Homo sapiens cDNA clone HTFAVE06 5'
3279	15890		15.76	7.0E-33	AW971307.1	EST_HUMAN	EST383396 MAGI3 ressequences, MAGL Homo sapiens cDNA
8876	21415		1.06	7.0E-33	X54890.1	NT	Human hLRP mRNA for leukocyte common antigen-related peptide (protein-tyrosine phosphate) (EC 3.1.3.48)
10708	23238	36249	4.73	7.0E-33	BF347229.1	EST_HUMAN	602021194F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4156670 5'
11127	23635	36676	2.53	7.0E-33	AW971568.1	EST_HUMAN	EST3833657 MAGI3 ressequences, MAGL Homo sapiens cDNA
11915	24253	31009	7.43	7.0E-33	AA601416.1	EST_HUMAN	no16h01.s1 NCI_CGAP_Phe1 Homo sapiens cDNA clone IMAGE:1100881 3' similar to contains L1.t1 L1 repetitive element
3800	16400		0.79	6.0E-33	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
6217	18827	31599	1.11	6.0E-33	F30631.1	EST_HUMAN	HSPD21201 HM3 Homo sapiens cDNA clone s4000107H06
6217	18827	31600	1.11	6.0E-33	F30631.1	EST_HUMAN	HSPD21201-HM3 Homo sapiens cDNA clone s4000107H06
8515	21054	33977	7.9	6.0E-33	J04038.1	NT	Human glyceraldehyde-3-phosphate dehydrogenase (GAPDH) gene, complete cds
8636	21175	34094	4.14	6.0E-33	11429188	NT	Homo sapiens similar to RAD23 (S. cerevisiae) homolog B (H. sapiens) (LOC83277), mRNA
9923	22419	35393	1.73	6.0E-33	6755609	NT	Mus musculus SRY-box containing gene 6 (Ssx6), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9923	22419	35394	1.73	6.0E-33	8755609	NT	Mus musculus SRY-box containing gene 6 (Sox6), mRNA
1814	14404		1.48	5.0E-33	BF373515.1	EST_HUMAN	QY1-FT0169-100700-271-a02 FT0169 Homo sapiens cDNA
1925	14510		1.2	5.0E-33	11141884	NT	Homo sapiens solute carrier family 5 (choline transporter), member 7 (SLC5A7), mRNA
1943	14527	27082	1.32	5.0E-33	4507208	NT	Homo sapiens spermidine synthase (SRM) mRNA
1943	14527	27083	1.32	5.0E-33	4507208	NT	Homo sapiens spermidine synthase (SRM) mRNA
4132	16724	29178	0.8	5.0E-33	AB014599.1	NT	Homo sapiens mRNA for KIAA0689 protein, partial cds
10147	22842	35632	0.76	5.0E-33	AW264679.1	EST_HUMAN	xq33f11.x1 NCI_CGAP_Lu28 Homo sapiens cDNA clone IMAGE:2752481 3'
10147	22842	35633	0.76	5.0E-33	AW264679.1	EST_HUMAN	xq33f11.x1 NCI_CGAP_Lu28 Homo sapiens cDNA clone IMAGE:2752481 3'
11720	24126		1.43	5.0E-33	11433063	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A), mRNA
1167	13768		1.82	4.0E-33	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
2170	14747	27316	1.67	4.0E-33	4758987	NT	Homo sapiens RAB1, member RAS oncogene family (RAB1) mRNA
2484	15031		2.24	4.0E-33	AA626821.1	EST_HUMAN	ab51b11.r1 Stratiogene lung carcinoma 637218 Homo sapiens cDNA clone IMAGE:844317 5' similar to contains Alu repetitive element; contains MER28.b2 MER28 repetitive element 1
2582	15145	27713	1.92	4.0E-33	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
4581	17184	29807	1.39	4.0E-33	AW283349.1	EST_HUMAN	UI-H-B12-ah1-c-03-0-UI.s1 NCI_CGAP_Sub4 Homo sapiens cDNA clone IMAGE:2727149 3'
5599	18228	30677	21.86	4.0E-33	AA053053.1	EST_HUMAN	271a08.r1 Stratiogene colon (#937204) Homo sapiens cDNA clone IMAGE:510038 5' similar to gb:X12871_ma1 HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN A1 (HUMAN);
6526	19126	31919	0.76	4.0E-33	8393694	NT	Homo sapiens polymerase (DNA directed), alpha (POLA), mRNA
6526	19126	31920	0.76	4.0E-33	8393694	NT	Homo sapiens polymerase (DNA directed), alpha (POLA), mRNA
1128	13731		5.55	3.0E-33	BE350127.1	EST_HUMAN	h109g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER28.b3 MER28 repetitive element 1
1129	13731		3.84	3.0E-33	BE350127.1	EST_HUMAN	h109g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER28.b3 MER28 repetitive element 1
2493	15488		1.01	3.0E-33	AV847851.1	EST_HUMAN	AV847851 GLC Homo sapiens cDNA clone GLCFCF09 3'
10336	22830	35824	1.16	3.0E-33	AA861510.1	EST_HUMAN	ak32b12.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1407847 3' similar to TR:Q13579
19	12698		0.82	2.0E-33	A1160189.1	EST_HUMAN	Q13579 MARINER TRANSPOSASE. 1
109	12698		2.24	2.0E-33	A1160189.1	EST_HUMAN	qb67g03.x1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:1705204 3' similar to contains OFR.11 OFR repetitive element 1
1415	14008	26536	2.48	2.0E-33	AA010242.1	EST_HUMAN	qb67g03.x1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:1705204 3' similar to contains OFR.11 OFR repetitive element 1
1415	14008	26537	2.48	2.0E-33	AA010242.1	EST_HUMAN	qb67g03.x1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:1705204 3' similar to contains OFR.11 OFR repetitive element 1
4510	17094		4.41	2.0E-33	BE159039.1	EST_HUMAN	z108a08.r1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:430214 5'
							z108a08.r1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:430214 5'
							MRO-HT0405-160300-202-d08 HT0405 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5122	17694	30131	12.23	2.0E-33	AA626683.1	EST_HUMAN	ab51g11.1 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:844388 5' similar to gb:X00734_cds1 TUBULIN BETA-5 CHAIN (HUMAN);
5255	17818	30242	1.93	2.0E-33	11421332	NT	Homo sapiens hypothetical protein SIRP-b2 (SIRP-b2), mRNA
5255	17818	30243	1.93	2.0E-33	11421332	NT	Homo sapiens hypothetical protein SIRP-b2 (SIRP-b2), mRNA
6555	19153	31949	1.5	2.0E-33	A1277492.1	EST_HUMAN	q98601.x1 Soares NIH-IMPu_S1 Homo sapiens cDNA clone IMAGE:1880161 3'
9029	21566		2.63	2.0E-33	A1052256.1	EST_HUMAN	oz21403.x1 Soares fetal liver spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1675973 3' similar to gb:M29536 TRANSLATIONAL INITIATION FACTOR 2 BETA SUBUNIT (HUMAN);
10497	22991	36000	0.65	2.0E-33	11421332	NT	Homo sapiens hypothetical protein SIRP-b2 (SIRP-b2), mRNA
10497	22991	36001	0.65	2.0E-33	11421332	NT	Homo sapiens hypothetical protein SIRP-b2 (SIRP-b2), mRNA
10982	23486	36525	1.8	2.0E-33	AA453647.1	EST_HUMAN	zx48f05.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:795489 3' similar to TR:G1263081 G1263081 MARINER TRANSPOSASE ;
9	12688		1.08	1.0E-33	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
7437	19961	32827	1.21	1.0E-33	M13975.1	NT	Homo sapiens protein kinase C beta-II type (PRKCB1) mRNA, complete cds
9934	25126		0.62	1.0E-33	U60822.1	NT	Human dystrophin (DMD) gene, exons 7, 8 and 9, and partial cds
11202	23707	36759	2.63	1.0E-33	AW996818.1	EST_HUMAN	QV3-BN0047-230200-102-603 BN0047 Homo sapiens cDNA
11515	23963	37033	5.83	1.0E-33	U60822.1	NT	Human dystrophin (DMD) gene, exons 7, 8 and 9, and partial cds
12214	24437		1.6	1.0E-33	A1927191.1	EST_HUMAN	wo88c06.x1 NCI CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2462410 3'
12403	12688		2.81	1.0E-33	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
12434	24575	30913	2.55	1.0E-33	AV727809.1	EST_HUMAN	AV727809 HTC Homo sapiens cDNA clone HTCCNC12 5'
12628	24706		4.56	9.0E-34	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
1494	14086	26626	2.3	7.0E-34	T70845.1	EST_HUMAN	y415e05.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:108320 5'
9911	14086	26626	0.66	7.0E-34	T70845.1	EST_HUMAN	y415e05.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:108320 5'
11989	24299		1.75	7.0E-34	H12866.1	EST_HUMAN	y114c10.r1 Soares placenta NB2HP Homo sapiens cDNA clone IMAGE:148722 5'
496	13128	25616	1.61	6.0E-34	U10991.1	NT	Human G2 protein mRNA, partial cds
496	13128	25617	1.61	6.0E-34	U10991.1	NT	Human G2 protein mRNA, partial cds
11797	24177	31028	1.92	6.0E-34	U03586.1	NT	Mus musculus DA/B/2J hair-specific (hac1-1) gene
1923	14508		2.5	5.0E-34	7706500	NT	Homo sapiens Npw38-binding protein NpwBP (LOC51729), mRNA
5218	17783	30201	5.85	5.0E-34	U30883.1	NT	Human splicing factor SRP55-1 (SRP55) mRNA, complete cds
8800	21339	34266	1.18	5.0E-34	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
10534	23071	36084	2.26	5.0E-34	AB037856.1	NT	Homo sapiens mRNA for KIAA1435 protein, partial cds
11133	23641		1.9	5.0E-34	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
2041	14623	27192	3.42	4.0E-34	AB04667.1	EST_HUMAN	tt94c06.x1 NCI CGAP_P128 Homo sapiens cDNA clone IMAGE:2249194 3'

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2745	15300	27868	1.06	4.0E-34	8922807	NT	Homo sapiens hypothetical protein FLJ10989 (FLJ10989), mRNA
8968	21508	34427	1.35	4.0E-34	BF209778.1	EST_HUMAN	601874950F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4102213 5'
6379	18983	31763	1.13	3.0E-34	M37277.1	NT	Human Ig gamma1 H-chain D-region genes, partial cds
11031	23545		5.04	3.0E-34	BF035327.1	EST_HUMAN	601458531F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862086 5'
8881	21419	34343	1.67	2.0E-34	A1678101.1	EST_HUMAN	wd35g06.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2330170 3' similar to contains MER29.12 MER29 repetitive element ;
8881	21419	34344	1.67	2.0E-34	A1678101.1	EST_HUMAN	wd35g06.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2330170 3' similar to contains ADP ATP CARRIER PROTEIN, LIVER ISOFORM T2 (ADP/ATP TRANSLOCASE 3) (ADENINE NUCLEOTIDE TRANSLOCATOR 3) (ANT 3)
1552	14144	26678	7.44	1.0E-34	P12236	SWISSPROT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
3738	18337	28802	1.24	1.0E-34	AF003528.1	NT	Homo sapiens WNT3 precursor (WNT3) mRNA, complete cds
4145	18737	29180	0.62	1.0E-34	AY008397.1	NT	Homo sapiens WNT3 precursor (WNT3) mRNA, complete cds
4145	18737	29191	0.62	1.0E-34	AY008397.1	NT	Homo sapiens WNT3 precursor (WNT3) mRNA, complete cds
4578	17181		8.22	1.0E-34	BE071414.1	EST_HUMAN	RC2-BT0508-240400-016-h08 BT0506 Homo sapiens cDNA
6287	18895	31664	2.69	1.0E-34	BE874052.1	EST_HUMAN	601484430F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3886989 5'
6287	18895	31685	2.68	1.0E-34	BE874052.1	EST_HUMAN	601484430F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3886989 5'
9813	22113	35076	17.45	1.0E-34	AL036635.1	EST_HUMAN	DKFp564A1563_r1 564 (synonym: hbr2) Homo sapiens cDNA clone DKFp564A1563 5'
11077	23589	36827	1.94	1.0E-34	11439599	NT	Homo sapiens nucleobindin 2 (NUCB2), mRNA
12176	25037		3.1	1.0E-34	AA807087.1	EST_HUMAN	cc31c11.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1351316 3' similar to gb:X68203 TYROSINE-PROTEIN KINASE RECEPTOR FLT4 PRECURSOR (HUMAN);
12423	24608		4.62	1.0E-34	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
3707	16308	28776	1.45	9.0E-35	AW663302.1	EST_HUMAN	hh77b08.y1 NCL_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2868787 5'
243	12902		10.67	8.0E-35	6031180	NT	Homo sapiens prohibitin (PHB) mRNA
1772	14362	26907	2.03	8.0E-35	BF589837.1	EST_HUMAN	naa33a08.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3258134 3' similar to TR:O75912 O75912 DIACYLGLYCEROL KINASE IOTA ;
1772	14362	26908	2.03	8.0E-35	BF589837.1	EST_HUMAN	naa33a08.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3258134 3' similar to TR:O75912
4891	17585	30010	3.45	8.0E-35	BF183195.1	EST_HUMAN	O75912 DIACYLGLYCEROL KINASE IOTA ;
10570	23105	38120	1.8	8.0E-35	BE378480.1	EST_HUMAN	601809588F1 NIH_MGC_18 Homo sapiens cDNA clone IMAGE:4040324 5'
11907	24245		2.96	8.0E-35	BF569282.1	EST_HUMAN	601236468F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3608513 5'
6810	19207	32015	2	7.0E-35	11425417	NT	602184624T1 NIH_MGC_42 Homo sapiens cDNA clone IMAGE:4300660 3'
1458	14050	26582	1.08	6.0E-35	AA757115.1	EST_HUMAN	Homo sapiens phosphatidylinositol glycan, class L (PIGL), mRNA
2010	14592	27152	1.29	6.0E-35	6005975	NT	ah53h03.s1 Soares_testis_NHT Homo sapiens cDNA clone 1309387 3'
							Homo sapiens zinc finger protein 208 (ZNF208), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4127	16719	29174	0.67	6.0E-35	AW297191.1	EST_HUMAN	UI-H-BW0-ajd-09-Q-UI s1 NCI_CGAP_Sub66 Homo sapiens cDNA clone IMAGE:2731433 3'
7838	20380	33285	3.41	6.0E-35	600592.1	NT	Homo sapiens triple functional domain (PTRPF interacting) (TRIO), mRNA
8643	21182	34101	0.49	6.0E-35	X94232.1	NT	H. sapiens mRNA for novel T-cell activation protein
8643	21182	34102	0.49	6.0E-35	X94232.1	NT	H. sapiens mRNA for novel T-cell activation protein
9584	22084	35048	0.7	6.0E-35	AB002364.1	NT	Human mRNA for KIAA0366 gene, partial cds
9817	22315	35296	2.42	6.0E-35	AB037786.1	NT	Homo sapiens mRNA for KIAA1365 protein, partial cds
152	12815	25303	37.67	5.0E-35	AF154830.1	NT	Homo sapiens carbanil phosphate synthetase 1 mRNA, complete cds
1747	14337	26883	1.28	5.0E-35	X63392.1	NT	H. sapiens immunoglobulin kappa light chain variable region L14
3043	15659	28139	1.39	5.0E-35	6912639	NT	Homo sapiens Ring1 and YY1 binding protein (RYBP), mRNA
4499	17083	29533	1.81	5.0E-35	AF023268.1	NT	Homo sapiens cik2 kinase (CLK2), propin1, cote1, glucocerebrosidase (GBA), and meladin genes, complete cds; meladin pseudogene and glucocerebrosidase pseudogene, and thrombospondin3 (THBS3) gene, partial cds
8125	20686		3.51	5.0E-35	BE890692.1	EST_HUMAN	601431884F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3917228 5'
8151	20692	33606	2.29	5.0E-35	AI208765.1	EST_HUMAN	qg38c05.x1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1837448 3' similar to SW:Y249_HUMAN Q92539 HYPOTHETICAL PROTEIN KIAA0249. ;
8151	20692	33607	2.29	5.0E-35	AI208765.1	EST_HUMAN	qg38c05.x1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1837448 3' similar to SW:Y249_HUMAN Q92539 HYPOTHETICAL PROTEIN KIAA0249. ;
11056	23568		3.53	5.0E-35	AA001786.1	EST_HUMAN	SW:Y249_HUMAN Q92539 HYPOTHETICAL PROTEIN KIAA0249. ;
1481	14074	26613	13.95	4.0E-35	BE257907.1	EST_HUMAN	zh84f12.r1 Soares fetal liver spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:428015 5'
1855	14443	26999	4.12	4.0E-35	H91193.1	EST_HUMAN	601109719F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3350405 5'
							wj98a07.r1 Soares fetal liver spleen_1NFLS Homo sapiens cDNA clone IMAGE:241236 5' similar to contains PTRS repetitive element ;
4927	17502		0.58	4.0E-35	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
7260	19788		2.06	4.0E-35	BE350127.1	EST_HUMAN	h09g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3148286 3' similar to contains MER29 b3 MER29 repetitive element ;
8455	20995	33913	6.68	4.0E-35	AL046586.1	EST_HUMAN	DKFZp434L148_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434L148 5'
1623	14216	26748	31.49	3.0E-35	BE268182.1	EST_HUMAN	601125260F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3345083 5'
2369	14940		2.22	3.0E-35	AF224492.1	NT	Homo sapiens phospholipid scramblase 1 gene, complete cds
5543	18175	30569	22.73	3.0E-35	BF433100.1	EST_HUMAN	7n25a09.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3565361 3' similar to TR:Q9QZH7 Q9QZH7 F-BOX PROTEIN FBL2 ;
5543	18175	30590	22.73	3.0E-35	BF433100.1	EST_HUMAN	7n25a09.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3565361 3' similar to TR:Q9QZH7 Q9QZH7 F-BOX PROTEIN FBL2 ;
9409	21918		1.72	3.0E-35	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10078	22573	35568	0.8	3.0E-35	AW003063.1	EST_HUMAN	wr03a05.x1 NCI_CGAP_GC8 Homo sapiens cDNA clone IMAGE:2480432 3' similar to SW:POL.1_HUMAN P10268 RETROVIRUS-RELATED POL POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ;
113	15407	25269	1.18	2.0E-35	N88985.1	EST_HUMAN	K6932F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone K6932 5' similar to REPETITIVE ELEMENT
1230	13828	26344	1.13	2.0E-35	T11908.1	EST_HUMAN	A871F Heart Homo sapiens cDNA clone A871
2259	14833	27411	4.88	2.0E-35	AB018413.1	NT	Homo sapiens mRNA for Gab2, complete cds
3353	15861	28437	0.79	2.0E-35	6912459	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
3353	15861	28438	0.79	2.0E-35	6912459	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
3613	16216		0.85	2.0E-35	AB020702.1	NT	Homo sapiens mRNA for KIAA0895 protein, partial cds
3981	16579	28049	0.86	2.0E-35	BE247575.1	EST_HUMAN	TCBAP2E4328 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP4328
3981	16579	29050	0.86	2.0E-35	BE247575.1	EST_HUMAN	TCBAP2E4328 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP4328
4777	17358		2.99	2.0E-35	H49239.1	EST_HUMAN	yt19a12.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:274079 5'
5770	18396	31110	1.48	2.0E-35	BF332417.1	EST_HUMAN	QV0-BT0701-210400-189-b04 BT0701 Homo sapiens cDNA
10875	23207	36219	4.14	2.0E-35	X59417.1	NT	H.sapiens PROS-27 mRNA
11663	15961	28437	1.34	2.0E-35	6912459	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
11663	15961	28438	1.34	2.0E-35	6912459	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
12405	24563		42.99	2.0E-35	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
12525	15407	25269	1.4	2.0E-35	N88985.1	EST_HUMAN	K6932F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone K6932 5' similar to REPETITIVE ELEMENT
50	12730	25184	5.95	1.0E-35	AA631949.1	EST_HUMAN	fmfc16 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR12-1
50	12730	25195	5.95	1.0E-35	AA631949.1	EST_HUMAN	fmfc16 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR12-1
782	13401	25903	55.23	1.0E-35	AW389473.1	EST_HUMAN	IL2-ST0162-131099-006-d12 ST0162 Homo sapiens cDNA
782	13401	25904	55.23	1.0E-35	AW389473.1	EST_HUMAN	IL2-ST0162-131099-006-d12 ST0162 Homo sapiens cDNA
942	13555		1.15	1.0E-35	T87947.1	EST_HUMAN	yd93a01.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:115752 5' similar to SP:A44282 A44282 RETROVIRUS-RELATED POL POLYPROTEIN - HUMAN ;
2579	15141	27710	1.98	1.0E-35	7705994	NT	Homo sapiens hypothetical protein (LOC51233), mRNA
2795	15348	27917	1.36	1.0E-35	BE350127.1	EST_HUMAN	h09g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER28.b3 MER29 repetitive element ;
2795	15348	27918	1.36	1.0E-35	BE350127.1	EST_HUMAN	h09g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER28.b3 MER29 repetitive element ;
3177	15790	28262	1.03	1.0E-35	8006030	NT	Homo sapiens transcription elongation factor B (SIII), polypeptide 1-lik (TCEB1L) mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3199	15811	28284	1.52	1.0E-35	AV650422.1	EST_HUMAN	AV650422 GLC Homo sapiens cDNA clone GLCOEF06 3'
3199	15811	28285	1.52	1.0E-35	AV650422.1	EST_HUMAN	AV650422 GLC Homo sapiens cDNA clone GLCOEF06 3'
4513	17097	29543	5.19	1.0E-35	7656905	NT	Mus musculus activin receptor interacting protein 1 (Arip1-pending), mRNA
4513	17097	29544	5.19	1.0E-35	7656905	NT	Mus musculus activin receptor interacting protein 1 (Arip1-pending), mRNA
5701	18327	30831	1.31	1.0E-35	11526236	NT	Homo sapiens chromatin assembly factor 1, subunit B (p60) (CHAF1B), mRNA
7069	18088	30444	0.73	1.0E-35	AW808665.1	EST_HUMAN	MR1-ST0111-111199-011-407 ST0111 Homo sapiens cDNA
7069	18088	30445	0.73	1.0E-35	AW808665.1	EST_HUMAN	MR1-ST0111-111199-011-407 ST0111 Homo sapiens cDNA
7496	20019	32883	0.8	1.0E-35	AB033105.1	NT	Homo sapiens mRNA for KIAA1279 protein, partial cds
7637	20149	33033	0.98	1.0E-35	11418002	NT	Homo sapiens KIAA0645 gene product (KIAA0645), mRNA
9461	24794	34941	3.33	1.0E-35	AU158595.1	EST_HUMAN	AU158595 PLAGE3 Homo sapiens cDNA clone PLAGE3000382 3'
9461	24794	34942	3.33	1.0E-35	AU158595.1	EST_HUMAN	AU158595 PLAGE3 Homo sapiens cDNA clone PLAGE3000382 3'
10470	22964	35974	0.57	1.0E-35	BF589594.1	EST_HUMAN	naa06d06.x1 NCL_CGAP_P128 Homo sapiens cDNA clone IMAGE:3254051 3' similar to TR:O31341
10470	22964	35975	0.57	1.0E-35	BF589594.1	EST_HUMAN	O31341 BETA-GALACTOSIDASE
11601	24044		4.48	1.0E-35	A1525119.1	EST_HUMAN	naa06d06.x1 NCL_CGAP_P128 Homo sapiens cDNA clone IMAGE:3254051 3' similar to TR:O31341
11695	24996		1.3	1.0E-35	11418274	NT	O31341 BETA-GALACTOSIDASE
12287	24489		1.87	1.0E-35	BE792832.1	EST_HUMAN	promtra-7, D01.r bvtumor Homo sapiens cDNA 5'
9156	21691	34635	0.51	8.0E-36	AA348480.1	EST_HUMAN	Homo sapiens fibulin 1 (FBLN1), mRNA
10060	22555		2.13	8.0E-36	7706259	NT	601584833F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3938985 5'
2957	15573	28050	1.15	7.0E-36	AW857579.1	EST_HUMAN	EST54938 Hippocampus II Homo sapiens cDNA 5' and similar to similar to endogenous retrovirus 9, 5' LTR
3152	15768		5.38	7.0E-36	4557498	NT	Homo sapiens CGI-09 protein (LOC51605), mRNA
7650	20162	33049	6.73	7.0E-36	U06872.1	NT	CM1-CT0315-091299-063-407 CT0315 Homo sapiens cDNA
7650	20162	33050	6.73	7.0E-36	U06872.1	NT	Homo sapiens C-terminal binding protein 2 (CTBP2) mRNA
12070	24350	30965	5.15	7.0E-36	AF052051.1	NT	Human carcinoembryonic antigen gene family member 12 (CGM12) gene, exons L and L/N
2048	14630	27199	2.5	6.0E-36	7706622	NT	Human carcinoembryonic antigen gene family member 12 (CGM12) gene, exons L and L/N
2461	15028		5.35	6.0E-36	AB035346.1	NT	Homo sapiens glutathione transferase A4 gene, exon 1
3701	16302	28770	0.98	6.0E-36	BF515101.1	EST_HUMAN	Homo sapiens ninjurin 2 (NINJ2), mRNA
5534	18166	30580	9.75	6.0E-36	AH435169.1	EST_HUMAN	Homo sapiens TOL9 gene, exon 12
7163	19695	32541	3.97	6.0E-36	AW780143.1	EST_HUMAN	UI-H-BW1-ann-c-12-0-U1.s1 NCL_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3083542 3'
8586	21125	34045	2.54	6.0E-36	AF208161.1	NT	th93b06.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2126195 3' similar to gb:M11949 PANCREATIC SECRETORY TRYPSIN INHIBITOR PRECURSOR (HUMAN);
							hs06h02.x1 NCL_CGAP_Co14 Homo sapiens cDNA clone IMAGE:3036627 3' similar to SW:IMA2_HUMAN
							P52282 IMPORTIN ALPHA-2 SUBUNIT
							Homo sapiens syncytin precursor, mRNA, complete cds



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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10125	22620		0.54	6.0E-36	C16927.1	EST_HUMAN	C16927 Clontech human aorta polyA+ mRNA (#6572) Homo sapiens cDNA clone GEN-535C11 5'
11422	23873	36936	2.62	6.0E-36	A1380498.1	EST_HUMAN	1185c09.x1 NCL CGAP_CELL1 Homo sapiens cDNA clone IMAGE:2107024 3' similar to contains MER8.b2
143	12808	25296	12.3	5.0E-36	AJ271735.1	NT	MER8 repetitive element ; Homo sapiens Xq pseudautosomal region; segment 1/2
2779	15332	27901	15.02	5.0E-36	BE388436.1	EST_HUMAN	601285567F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3607289 5'
3672	16273	28739	1.07	5.0E-36	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
4903	17478	28935	1.8	5.0E-36	5728729	NT	Homo sapiens API5-like 1 (API5L1), mRNA
4903	17478	28936	1.8	5.0E-36	5728729	NT	Homo sapiens API5-like 1 (API5L1), mRNA
11661	12808	25296	4.05	5.0E-36	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
11963	24285	31024	2.88	5.0E-36	11417882	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
1267	13864	26381	2.14	4.0E-36	BE010038.1	EST_HUMAN	PM3-BN0176-100400-001-g04 BN0176 Homo sapiens cDNA
1491	14083	26624	1.88	4.0E-36	P10286	SWISSPROT	RETROVIRUS-RELATED POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ; ENDONUCLEASE]
1687	14279	26813	1.35	4.0E-36	BE382574.1	EST_HUMAN	601298574F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3628386 5'
2264	14638		1.7	4.0E-36	AW247772.1	EST_HUMAN	2820020.5prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2820020 5'
3397	16005	28486	0.83	4.0E-36	BE389299.1	EST_HUMAN	601282266F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3604168 5'
3397	16005	28487	0.83	4.0E-36	BE389299.1	EST_HUMAN	601282266F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3604168 5'
4866	17442	28893	0.57	4.0E-36	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
5310	17872	30294	0.58	4.0E-36	AA905361.1	EST_HUMAN	ok05b11.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1506909 3' similar to
5892	18515		0.94	4.0E-36	R64023.1	EST_HUMAN	SW:D3HL_RAT_P29266 3-HYDROXYISOBUTYRATE DEHYDROGENASE PRECURSOR ; Y1905.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:139713 5'
6205	18815	31566	2.19	4.0E-36	11497041	NT	Homo sapiens a disintegrin and metalloproteinase domain 22 (ADAM22), transcript variant 3, mRNA
7849	20161	33048	1.77	4.0E-36	M33320.1	NT	Human platelet Glycoprotein Iib (GPIIb) gene, exons 2-28
8490	21028	33947	1.15	4.0E-36	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
8490	21029	33948	1.15	4.0E-36	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
10867	23368	36403	2.36	4.0E-36	AA400370.1	EST_HUMAN	zu69c10.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:743250 5'
11981	24292		1.46	4.0E-36	11420518	NT	Homo sapiens nuclear factor of activated T-cells, cytoplasmic 2 (NFATC2), mRNA
12026	24872		6.32	4.0E-36	AV753629.1	EST_HUMAN	AV753629 TP Homo sapiens cDNA clone TPGABH01 5'
725	13345	25837	2.82	3.0E-36	AF099810.1	NT	Homo sapiens neurixin III-alpha gene, partial cds
1545	14137	26671	1.01	3.0E-36	AF110239.1	NT	Homo sapiens calcium/calmodulin-stimulated cyclic nucleotide phosphodiesterase (PDE1A) gene, partial cds
1545	14137	26672	1.01	3.0E-36	AF110239.1	NT	Homo sapiens calcium/calmodulin-stimulated cyclic nucleotide phosphodiesterase (PDE1A) gene, partial cds
2338	14609	27481	0.88	3.0E-36	7662401	NT	Homo sapiens KIAA0952 protein (KIAA0952), mRNA

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4600	17184	29631	7.36	3.0E-36	10181139	NT	Mus musculus junctophilin 1 (jp1-pending), mRNA
10985	23499	36529	2.06	3.0E-36	BF035327.1	EST_HUMAN	601456531F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862086 5'
3204	15816	28292	3.78	2.0E-36	BE259287.1	EST_HUMAN	601108343F1 NIH_MGC_76 Homo sapiens cDNA clone IMAGE:3342706 5'
5094	17667	30106	9.22	2.0E-36	AW880376.1	EST_HUMAN	QV0-OT0030-240300-174 h04 OT0030 Homo sapiens cDNA
5677	18304	30786	2.55	2.0E-36	AF267747.1	NT	Mus musculus p47-phox gene, complete cds
6012	18632	31367	4.22	2.0E-36	T08756.1	EST_HUMAN	EST06848 Infant Brain, Berto Soares Homo sapiens cDNA clone HIBB28 5' end
6690	19288	32089	12.01	2.0E-36	T69629.1	EST_HUMAN	yc44a07.r1 Stratiene liver (#937224) Homo sapiens cDNA clone IMAGE:83508 5'
9310	21824	34772	0.96	2.0E-36	BF512794.1	EST_HUMAN	UIH-BW1-amu-e-11-Q-UJ.s1 NCI CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3071132 3'
9488	21867	34817	0.6	2.0E-36	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
9488	21867	34818	0.6	2.0E-36	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
918	13531	28049	2.35	1.0E-36	BE409310.1	EST_HUMAN	601300938F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635480 5'
2190	14766	27337	0.91	1.0E-36	BE146523.1	EST_HUMAN	RC1-HT0217-131199-021-h07 HT0217 Homo sapiens cDNA
2190	14766	27338	0.91	1.0E-36	BE146523.1	EST_HUMAN	RC1-HT0217-131199-021-h07 HT0217 Homo sapiens cDNA
2243	14818	27392	1.34	1.0E-36	BF673761.1	EST_HUMAN	602136483F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4272886 5'
2538	15102		1.75	1.0E-36	AW276898.1	EST_HUMAN	xs57a06.x1 NCI CGAP_Ov39 Homo sapiens cDNA clone IMAGE:2744434 3' similar to WP:C13F10.7
3388	15997		1.23	1.0E-36	AF156962.1	NT	CE08148 ;
5904	18528	31252	0.86	1.0E-36	AL044446.1	EST_HUMAN	Homo sapiens human endogenous retrovirus W proC8-19 protease (pro) gene, partial cds
6059	18676	31418	0.97	1.0E-36	4827064	NT	DKFZp434G022_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434G022 5'
6330	18936		3.97	1.0E-36	A1867714.1	EST_HUMAN	Homo sapiens zinc finger protein 147 (estrogen-responsive finger protein) (ZNF147) mRNA
6524	19124	31916	1.13	1.0E-36	R25012.1	EST_HUMAN	wb37c12.x1 NCI CGAP_GC6 Homo sapiens cDNA clone IMAGE:2307862 3' similar to contains Alu repetitive element.
6524	19124	31917	1.13	1.0E-36	R25012.1	EST_HUMAN	yg36g10.r1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:34529 5' similar to SP:CAHP_HUMAN P35219 CARBONIC ANHYDRASE-RELATED PROTEIN ;
6783	19374	32190	0.7	1.0E-36	AL120542.1	EST_HUMAN	yg36g10.r1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:34529 5' similar to SP:CAHP_HUMAN P35219 CARBONIC ANHYDRASE-RELATED PROTEIN ;
7901	20443	33347	3.18	1.0E-36	AA148034.1	EST_HUMAN	DKFZp761A229_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761A229 5'
7901	20443	33348	3.18	1.0E-36	AA148034.1	EST_HUMAN	zs51a12.r1 Stratiene endothelial cell 937223 Homo sapiens cDNA clone IMAGE:590398 5'
7997	20539	33441	1.22	1.0E-36	AA420467.1	EST_HUMAN	nc60e08.r1 NCI CGAP_P1 Homo sapiens cDNA clone IMAGE:745670
7997	20539	33442	1.22	1.0E-36	AA420467.1	EST_HUMAN	nc60e08.r1 NCI CGAP_P1 Homo sapiens cDNA clone IMAGE:745670
8120	20661	33570	0.73	1.0E-36	AU141688.1	EST_HUMAN	AU141688 THYRO1 Homo sapiens cDNA clone THYRO1001033 5'
8120	20661	33571	0.73	1.0E-36	AU141688.1	EST_HUMAN	AU141688 THYRO1 Homo sapiens cDNA clone THYRO1001033 5'
8959	21497	34420	2.88	1.0E-36	AW103958.1	EST_HUMAN	xe82b07.x1 NCI CGAP_Bn35 Homo sapiens cDNA clone IMAGE:2614357 3'
10023	22518	35513	3.89	1.0E-36	BF364169.1	EST_HUMAN	QV3-NN1023-010600-189-h01 NN1023 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10231	22726	35717	0.71	1.0E-36	AW855888.1	EST_HUMAN	RC3-CT0279-040500-017-a10 CT0279 Homo sapiens cDNA
10231	22726	35718	0.71	1.0E-36	AW855888.1	EST_HUMAN	RC3-CT0279-040500-017-a10 CT0279 Homo sapiens cDNA
10826	23347	36363	3.55	1.0E-36	AW897636.1	EST_HUMAN	CM3-NN0061-140400-147-h12 NN0061 Homo sapiens cDNA
11258	23768	36844	4.94	1.0E-36	AW504143.1	EST_HUMAN	UI-HF-BNO-ale-c-03-Q-UL1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078277 5'
11848	24208		6.11	1.0E-36	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
12316	24507		6.19	1.0E-36	AL163213.2	NT	Homo sapiens chromosome 21 segment HS21C013
12592	24683		3.59	1.0E-36	AF202723.1	NT	Homo sapiens Sad1 unc-84 domain protein 2 (SUN2) mRNA, partial cds
7415	19940	32804	1.94	9.0E-37	AW009277.1	EST_HUMAN	ws80b07.x1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:2504245 3'
7415	19940	32805	1.94	9.0E-37	AW009277.1	EST_HUMAN	ws80b07.x1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:2504245 3'
12113	24374		1.63	9.0E-37	W22618.1	EST_HUMAN	73D4 Human retina cDNA Tsp5091-cleaved sublibrary Homo sapiens cDNA not directional
3398	16008	26488	1.01	8.0E-37	4757979	NT	Homo sapiens chimerin (chimaerin) 2 (CHN2) mRNA
5456	18091		1.58	8.0E-37	BE698077.1	EST_HUMAN	CM0-JT0003-050800-503-d09 UT0003 Homo sapiens cDNA
5994	18614	31348	4.02	8.0E-37	BE350127.1	EST_HUMAN	h08g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3148256 3' similar to contains MER28.b3
5994	18614	31349	4.02	8.0E-37	BE350127.1	EST_HUMAN	h08g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3148256 3' similar to contains MER28.b3
6037	18656	31398	6.7	8.0E-37	AW840840.1	EST_HUMAN	RC1-CN0008-210100-012-a09_1 CN0008 Homo sapiens cDNA
7825	20367	33275	6.31	8.0E-37	X87344.1	NT	H. sapiens DNA, DMB, HLA-Z1, IPP2, LMP2, TAP1, LMP7, TAP2, DOB, DQB2 and RING8, 9, 13 and 14 genes
1328	13922		2.3	7.0E-37	AL042800.1	EST_HUMAN	DKFZp434E0422_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434E0422 5'
1780	14370	26914	1.55	7.0E-37	AF111167.2	NT	Homo sapiens Jun dimerization protein gene, partial cds; cfos gene, complete cds; and unknown gene
1780	14370	26915	1.55	7.0E-37	AF111167.2	NT	Homo sapiens Jun dimerization protein gene, partial cds; cfos gene, complete cds; and unknown gene
10637	23169	36180	7.76	7.0E-37	AI817700.1	EST_HUMAN	wk25b11.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2413341 3' similar to contains PTR5.12
10774	23268	36303	3.74	7.0E-37	AI536702.1	EST_HUMAN	PTR5 repetitive element;
5304	17866		2.5	6.0E-37	R10039.1	EST_HUMAN	tm87g03.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2165140 3' similar to contains L1.b3 L1
8377	20917	33837	0.54	8.0E-37	AF169689.1	NT	repetitive element;
12455	24598		3.85	6.0E-37	AF202723.1	NT	Vf25a02.r1 Soares fetal liver spleen 1NFSL Homo sapiens cDNA clone IMAGE:127850 5'
6243	18852	31622	4.92	5.0E-37	AA307123.1	EST_HUMAN	Homo sapiens protocadherin alpha 10 alternate isoform (PCDH-alpha10) mRNA, complete cds
6243	18852	31623	4.92	5.0E-37	AA307123.1	EST_HUMAN	Homo sapiens Sad1 unc-84 domain protein 2 (SUN2) mRNA, partial cds
8691	21230	34150	0.85	5.0E-37	AV750211.1	EST_HUMAN	EST178035 Colon carcinoma (HCC) cell line Homo sapiens cDNA 5' end
							EST178035 Colon carcinoma (HCC) cell line Homo sapiens cDNA 5' end
							AV750211 NPC Homo sapiens cDNA clone NPCBGH09 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10800	23323		4.94	5.0E-37	7657117	NT	Homo sapiens glycine C-acetyltransferase (2-amino-3-ketobutyrate-CoA ligase) (GCAT), mRNA
11843	24205		5.21	5.0E-37	AF149773.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
2468	15035	27602	1.7	4.0E-37	AA702794.1	EST_HUMAN	z90b04.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:448015 3'
9278	21804	34755	0.68	4.0E-37	AA843806.1	EST_HUMAN	ak08c02.s1 Soares_parathyroid_tumor_NHHPA Homo sapiens cDNA clone IMAGE:1405442 3'
10912	23431	36451	1.74	4.0E-37	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
10912	23431	36452	1.74	4.0E-37	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
2061	14841	27215	2.58	3.0E-37	AL048956.1	EST_HUMAN	DKFZp434L2418_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434L2418
2061	14841	27216	2.58	3.0E-37	AL048956.1	EST_HUMAN	DKFZp434L2418_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434L2418
2992	15808		3.5	3.0E-37	AW961150.1	EST_HUMAN	EST373222 MAGE resequenes, MAGF Homo sapiens cDNA
5126	17698		0.79	3.0E-37	BF035327.1	EST_HUMAN	601458631F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3882086 5'
7557	20075	32951	0.79	3.0E-37	AI749952.1	EST_HUMAN	at34c05.x1 Barstead colon HPLRB7 Homo sapiens cDNA clone IMAGE:2373896 3' similar to TR:Q13537
404	13079	25571	0.9	2.0E-37	D89790.1	NT	Q13537 SIMILAR TO POGO ELEMENT. ;
404	13079	25572	0.9	2.0E-37	D89790.1	NT	Homo sapiens mRNA for AML1, complete cds
1119	13722	26234	2.1	2.0E-37	AU131202.1	EST_HUMAN	Homo sapiens mRNA for AML1, complete cds
1119	13722	26235	2.1	2.0E-37	AU131202.1	EST_HUMAN	Homo sapiens mRNA for AML1, complete cds
2006	14588	27148	1.45	2.0E-37	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
3962	16560	29029	6.99	2.0E-37	4503210	NT	Homo sapiens cytochrome P450, subfamily XXVIIA (steroid 27-hydroxylase, cerebrotendinous xanthomatosis), polypeptide 1 (CYP27A1b) mRNA
4330	16917	28360	0.59	2.0E-37	4826865	NT	Homo sapiens DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 1 (DDX1) mRNA
8765	19358	32167	3.94	2.0E-37	AA346720.1	EST_HUMAN	EST52931 Fetal heart II Homo sapiens cDNA 5' end
7638	20480	33390	0.53	2.0E-37	BE537764.1	EST_HUMAN	601067534F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3453657 5'
7938	20480	33391	0.53	2.0E-37	BE537764.1	EST_HUMAN	601067534F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3453657 5'
7981	20523	33429	2.75	2.0E-37	BF204032.1	EST_HUMAN	601889157F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4111406 5'
11434	23884	36951	19.39	2.0E-37	AF176013.1	NT	Homo sapiens J domain containing protein 1 isoform b (JDP1) mRNA, complete cds
12633	24710		5.1	2.0E-37	11417972	NT	Homo sapiens pescadillo (zebrafish) homolog 1, containing BRCT domain (PES1), mRNA
2135	14713	27286	2.49	1.0E-37	AL163281.2	NT	Homo sapiens chromosome 21 segment HS21C081
3231	15943		0.98	1.0E-37	AW862082.1	EST_HUMAN	RC3-CT0347-210400-016-h03 CT0347 Homo sapiens cDNA
4243	16831	29282	0.96	1.0E-37	BE872395.1	EST_HUMAN	601448619F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3852652 5'
5075	17648	30089	3.67	1.0E-37	BF371719.1	EST_HUMAN	QV0-FN0180-280700-318-c10 FN0180 Homo sapiens cDNA
6155	18788		0.8	1.0E-37	7305360	NT	Mus musculus otogelin (Otog), mRNA
8156	20897	33610	0.84	1.0E-37	BE546032.1	EST_HUMAN	601072419F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3458308 5'
8670	21209	34127	3.03	1.0E-37	AA171406.1	EST_HUMAN	z21b02.r1 Stratiene neuroepithelium (#837231) Homo sapiens cDNA clone IMAGE:610059 5' similar to contains L1.12 L1 repetitive element ;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10577	23112	36125	5.51	1.0E-37	M22878.1	NT	Human somatic cytochrome c (HC1) processed pseudogene, complete cds
12167	24408		3.8	1.0E-37	BE771814.1	EST_HUMAN	CM3-FT0098-140700-243-407 FT0098 Homo sapiens cDNA
5950	18571	31303	1.71	9.0E-38	10049482	NT	Rattus norvegicus multidomain presynaptic cytomatrix protein Piccd0 (LOC56768), mRNA
1264	13861	26378	2.05	8.0E-38	11436955	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
2543	15107	27680	1.49	8.0E-38	BF346221.1	EST_HUMAN	602018401F1 NCI_CGAP_Brn87 Homo sapiens cDNA clone IMAGE:4153982 5'
12231	13861	26378	1.62	8.0E-38	11436955	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
4307	16893	26336	0.63	7.0E-38	H19092.1	EST_HUMAN	yn5107.r1 Soares adult brain N2b5HB55Y Homo sapiens cDNA clone IMAGE:171973 5'
3078	15693	28187	2.75	6.0E-38	BF033033.1	EST_HUMAN	601455722F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3859348 5'
5778	18401	31116	1.34	6.0E-38	11425114	NT	Homo sapiens zinc finger protein ZNF287 (ZNF287), mRNA
5778	18401	31117	1.34	6.0E-38	11425114	NT	Homo sapiens zinc finger protein ZNF287 (ZNF287), mRNA
11698	24110		10.47	6.0E-38	11435947	NT	Homo sapiens chromosome 12 open reading frame 3 (C12ORF3), mRNA
12201	24427	30952	14.11	6.0E-38	AB002059.1	NT	Homo sapiens DNA for Human P2XM, complete cds
12614	24837	30797	1.7	6.0E-38	11418164	NT	Homo sapiens adenylosuccinate lyase (ADSL), mRNA
756	13375	25870	1.26	5.0E-38	AW971819.1	EST_HUMAN	EST383908 MAGE resequences, MAGL Homo sapiens cDNA
2495	15059	27633	1.94	5.0E-38	AJ237740.1	NT	Homo sapiens RIBIIR, gene (partial), exon 8
7096	19667	32508	2.15	5.0E-38	BE871610.1	EST_HUMAN	601450148F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3854074 5'
124	12763	25277	3.63	4.0E-38	Z25486.1	NT	B. taurus mitochondrial aspartate aminotransferase mRNA, complete CDS
124	12793	25278	3.63	4.0E-38	Z25486.1	NT	B. taurus mitochondrial aspartate aminotransferase mRNA, complete CDS
1199	13800	26312	1.06	3.0E-38	11435947	NT	Homo sapiens chromosome 12 open reading frame 3 (C12ORF3), mRNA
2148	14725		2.39	3.0E-38	AF003530.1	NT	Homo sapiens homeobox protein CDX4 (CDX4) gene, complete cds and flanking repeat regions
3759	16380		1.37	3.0E-38	7548807	NT	Homo sapiens HIRA interacting protein 4 (dnaj-like) (HIRIP4), mRNA
3922	16520	26987	2.12	3.0E-38	P53538	SWISSPROT	SSU72 PROTEIN
3922	16520	26988	2.12	3.0E-38	P53538	SWISSPROT	SSU72 PROTEIN
4721	17302		0.66	3.0E-38	BE278301.1	EST_HUMAN	601157633F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3504272 5'
6950	24772	32254	7.24	3.0E-38	AL163300.2	NT	Homo sapiens chromosome 21 segment HS21C100
7568	20103	32978	6.83	3.0E-38	BF373684.1	EST_HUMAN	CM3-FT0181-140700-241-407 FT0181 Homo sapiens cDNA
8594	21123	34043	2.01	3.0E-38	H85494.1	EST_HUMAN	Y68504.r1 Soares melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:249775 5'
8594	21123	34044	2.01	3.0E-38	H85494.1	EST_HUMAN	Y68504.r1 Soares melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:249775 5'
8882	22379		1.7	3.0E-38	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
11196	23703		1.54	3.0E-38	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
12461	13800	26312	1.44	3.0E-38	11435947	NT	Homo sapiens chromosome 12 open reading frame 3 (C12ORF3), mRNA
54	12734	25202	1.84	2.0E-38	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
1422	14015	26544	2.23	2.0E-38	5902087	NT	Homo sapiens SMT3 (suppressor of mit two 3, yeast) homolog 2 (SMT3H2), mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1688	14280	26814	1.99	2.0E-38	AA437353.1	EST_HUMAN	zw30d01.r1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:770785 5' similar to SW:MA12_RABIT P45701 MANNOSYL-OLIGOSACCHARIDE ALPHA-1,2-MANNOSIDASE ;
1688	14280	26815	1.99	2.0E-38	AA437353.1	EST_HUMAN	zw30d01.r1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:770785 5' similar to SW:MA12_RABIT P45701 MANNOSYL-OLIGOSACCHARIDE ALPHA-1,2-MANNOSIDASE ;
4681	17263	29714	2.98	2.0E-38	4557887	NT	Homo sapiens keratin 18 (KRT18) mRNA
5293	17855	30280	0.63	2.0E-38	BE296224.1	EST_HUMAN	601177386F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3532590 5'
5293	17855	30281	0.63	2.0E-38	BE296224.1	EST_HUMAN	601177386F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3532590 5'
5327	17837	30264	0.63	2.0E-38	AA437181.1	EST_HUMAN	zw61d09.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:758129 5' similar to TR:G817957
7704	20213	33102	1.57	2.0E-38	AV721103.1	EST_HUMAN	G817957 GLYCINE RECEPTOR SUBUNIT ALPHA 4 ;
8420	20960		5.5	2.0E-38	BE165990.1	EST_HUMAN	MR3-HT0487-150200-113-g01 HT0487 Homo sapiens cDNA
8826	21365	34289	0.51	2.0E-38	F08450.1	EST_HUMAN	HSC18F031 normalized infant brain cDNA Homo sapiens cDNA clone c-1803
8895	21433	34356	1.37	2.0E-38	AF069755.1	NT	Homo sapiens orphan G protein-coupled receptor HG20 (HG20) mRNA, complete cds
9148	21683		0.89	2.0E-38	BE222256.1	EST_HUMAN	hu09g02.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3166130 3' similar to TR:O02710 O02710
10345	22639	35835	1.98	2.0E-38	D63479.2	NT	GAG POLYPROTEIN ;
11114	23624	36865	3.38	2.0E-38	AA595480.1	EST_HUMAN	Homo sapiens mRNA for KIAA0145 protein, partial cds
11114	23624	36866	3.38	2.0E-38	AA595480.1	EST_HUMAN	nc34g03.s1 NCI_CGAP_Pr23 Homo sapiens cDNA clone IMAGE:1102812 3' similar to TR:E212316
11363	23815	36876	6.15	2.0E-38	BE712790.1	EST_HUMAN	E212316 NADP DEPENDENT LEUKOTRIENE B4 12-HYDROXYDEHYDROGENASE ;
11496	23945	37014	3.87	2.0E-38	AF190501.1	NT	QV2-HT0698-080800-283-a05 HT0698 Homo sapiens cDNA
11496	23945	37015	3.87	2.0E-38	AF190501.1	NT	Homo sapiens leucine-rich repeat-containing G protein-coupled receptor 6 (LGR6) mRNA, partial cds
11753	24149		7.01	2.0E-38	AV726988.1	EST_HUMAN	Homo sapiens leucine-rich repeat-containing G protein-coupled receptor 6 (LGR6) mRNA, partial cds
11755	24150		1.68	2.0E-38	AB012723.1	NT	AV726988 HTC Homo sapiens cDNA clone HTCAXH07 5'
12050	24334		3.19	2.0E-38	M55630.1	NT	Homo sapiens gene for kinesin-like protein, complete cds
12060	24343	31000	5.31	2.0E-38	H55641.1	EST_HUMAN	Human topoisomerase I pseudogene 2
12128	24384		2.87	2.0E-38	S74906.1	NT	CHR220580 Chromosome 22 exon Homo sapiens cDNA clone C22_788 5'
12624	24702		1.55	2.0E-38	11418248	NT	E1 beta-pyruvate dehydrogenase beta [promoter] [human, placenta, Genomic, 1280 nt]
1132	13735		2.17	1.0E-38	AA401570.1	EST_HUMAN	Homo sapiens sulfotransferase-related protein (SULTX3), mRNA
2042	14624	27193	1.7	1.0E-38	4885288	NT	z062b02.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:742539 5' similar to contains element MER19 repetitive element ;
							Homo sapiens guanine nucleotide binding protein-like 1 (GNL1), mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2085	14845	27219	1.46	1.0E-38	7661969	NT	Homo sapiens KIAA0173 gene product (KIAA0173), mRNA
2539	15103	27676	1.71	1.0E-38	AF270831.1	NT	Homo sapiens cyclin K (CCNK) gene, exon 7
2845	15204	27777	14.26	1.0E-38	4758371	NT	Homo sapiens fibrinogen-like 1 (FGL1), mRNA
4235	16823	29274	1.03	1.0E-38	AB037863.1	NT	Homo sapiens mRNA for KIAA1442 protein, partial cds
4411	16996	29439	0.61	1.0E-38	4505016	NT	Homo sapiens low density lipoprotein receptor-related protein 6 (LRP6) mRNA, and translated products
4416	17001	29444	1.52	1.0E-38	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
4416	17001	29445	1.52	1.0E-38	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
4702	17284	29729	1.18	1.0E-38	8922543	NT	Homo sapiens hypothetical protein FLJ10600 (FLJ10600), mRNA
5289	17851		29.49	1.0E-38	N46880.1	EST_HUMAN	W58a01.r1 Soares_multiple_sclerosis_2NbhMSP Homo sapiens cDNA clone IMAGE:277704 5' similar to SW:CA1H_MOUSE P39081 COLLAGEN ALPHA 1(XVIII) CHAIN PRECURSOR. ;
6178	18788	31556	4.28	1.0E-38	7305360	NT	Mus musculus otogelin (Otog), mRNA
6178	18788	31557	4.28	1.0E-38	7305360	NT	Mus musculus otogelin (Otog), mRNA
7435	19959	32824	3	1.0E-38	AB014812.1	NT	Homo sapiens mRNA for KIAA0612 protein, partial cds
9080	21616	34551	0.97	1.0E-38	11422250	NT	Homo sapiens hypothetical protein FLJ10600 (FLJ10600), mRNA
9331	21845	34795	6.34	1.0E-38	BE350127.1	EST_HUMAN	h09g01.x1 NCJ_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3148256 3' similar to contains MER29.b3 MER29 repetitive element ;
11495	23915	36983	1.91	1.0E-38	7682109	NT	Homo sapiens KIAA0428 gene product (KIAA0428), mRNA
11906	24808		2.57	1.0E-38	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
58	12738	25208	8.61	8.0E-39	4502312	NT	Homo sapiens ATPase, H+ transporting, lysosomal (vacuolar proton pump) 16kD (ATP6C) mRNA
1438	14031	26559	1.49	8.0E-39	4758229	NT	Homo sapiens estrogen receptor-binding fragment-associated gene 9 (EBAG9) mRNA
1869	14455		0.88	8.0E-39	A823404.1	EST_HUMAN	wh53f10.x1 NCJ_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2384491 3' similar to TR:P87890 P87890 POL PROTEIN ;
2141	14719	27290	3.68	7.0E-39	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
10888	23218	36230	2.32	6.0E-39	BF331829.1	EST_HUMAN	QV1-BT0631-040800-357402 BT0631 Homo sapiens cDNA
11639	24078	37138	1.54	6.0E-39	11526372	NT	Homo sapiens hyaluronan-mediated motility receptor (RHAMM) (HMMR), mRNA
12532	24645		2.92	6.0E-39	BE670394.1	EST_HUMAN	7e34c03.x1 NCJ_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3284356 3' similar to WP:R151.6 CE00828 ;
1045	13653	28165	1.85	5.0E-39	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
3014	15630	28108	7.14	5.0E-39	A1750154.1	EST_HUMAN	a136b04.x1 Barstead colon HPLRB7 Homo sapiens cDNA clone IMAGE:2374063 3' similar to TR:Q15408 Q15408 NEUTRAL PROTEASE LARGE SUBUNIT contains LTR7.1 LTR7 repetitive element ;
12218	24441		2.69	5.0E-39	11420289	NT	Homo sapiens hypothetical protein FLJ10803 (FLJ10803), mRNA

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
576	13206	25686	35.11	4.0E-39	AB015610.1	NT	Chlorocephus aethiops mRNA for ribosomal protein S4X, complete cds
3631	16234	28709	0.75	4.0E-39	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
5995	18615	31350	0.73	4.0E-39	11422113	NT	Homo sapiens EBNA-2 co-activator (100kd) (p100), mRNA
5995	18615	31351	0.73	4.0E-39	11422113	NT	Homo sapiens EBNA-2 co-activator (100kd) (p100), mRNA
8020	20562	33463	0.95	4.0E-39	AA682949.1	EST_HUMAN	ae92g04.s1 Strategene schizo brain S11 Homo sapiens cDNA clone IMAGE:1020438 3' similar to contains
9252	21778	34728	0.82	4.0E-39	DB4116.1	NT	QFR.b1 OFR repetitive element ;
9252	21778	34729	0.82	4.0E-39	DB4116.1	NT	Homo sapiens DNA for prostacyclin synthase, exon 2
12237	24452		4.45	4.0E-39	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
12363	24536		5.52	4.0E-39	BE836452.1	EST_HUMAN	QV0-FN0063-260600-278-c06 FN0063 Homo sapiens cDNA
51	12731	25196	16.62	3.0E-39	AA631949.1	EST_HUMAN	fmfc16 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR12-1
51	12731	25197	16.62	3.0E-39	AA631949.1	EST_HUMAN	fmfc16 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR12-1
51	12731	25198	16.62	3.0E-39	AA631949.1	EST_HUMAN	fmfc16 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR12-1
11744	24143	36764	6.46	3.0E-39	A1084557.1	EST_HUMAN	ox63a10.s1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1660986 3' similar to SW:GTR5_RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE ;
11744	24143	36765	6.46	3.0E-39	A1084557.1	EST_HUMAN	ox63a10.s1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1660986 3' similar to SW:GTR5_RAT P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE ;
11791	24174		6.63	3.0E-39	H37903.1	EST_HUMAN	yp51c06.s1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:180954 3'
930	13543		9.84	2.0E-39	BE409203.1	EST_HUMAN	601301607F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3636289 5'
945	13558		15.07	2.0E-39	A1525119.1	EST_HUMAN	promna-7.D01.r bvtumor Homo sapiens cDNA 5'
1069	13674		3.85	2.0E-39	A1000573.1	NT	Homo sapiens homogenisate 1,2-dioxygenase gene, complete cds
1577	14170		41.87	2.0E-39	AW372318.1	EST_HUMAN	PM0-BT0340-211299-003-d02 BT0340 Homo sapiens cDNA
2016	14598	27162	2.5	2.0E-39	AA720574.1	EST_HUMAN	hw21g02.s1 NCI_CGAP_GCB0 Homo sapiens cDNA clone IMAGE:1241138 3' similar to contains THR.B3 THR repetitive element ;
2657	15216	27788	1.56	2.0E-39	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
4492	17077	29527	1.7	2.0E-39	BF370207.1	EST_HUMAN	RC4-FN0037-290700-011-a10 FN0037 Homo sapiens cDNA
5882	18309	30804	3.89	2.0E-39	AA508880.1	EST_HUMAN	ng86f03.s1 NCI_CGAP_P6 Homo sapiens cDNA clone IMAGE:341693
7405	19930	32794	1.95	2.0E-39	AA080867.1	EST_HUMAN	zn06f02.r1 Strategene INT neuron (#937233) Homo sapiens cDNA clone IMAGE:546651 5'
8252	20763	33710	0.55	2.0E-39	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
9415	21924		0.56	2.0E-39	AA984531.1	EST_HUMAN	am88c11.s1 Strategene schizo brain S11 Homo sapiens cDNA clone IMAGE:1630186 3'
9544	22044		0.54	2.0E-39	A1686680.1	EST_HUMAN	tu35603.x1 NCI_CGAP_P128 Homo sapiens cDNA clone IMAGE:2253052 3'
11309	23802	36863	3.11	2.0E-39	D86964.1	NT	Human mRNA for KIAA0209 gene, partial cds
1560	14152	26684	2.33	1.0E-39	AJ00345.1	NT	Homo sapiens KVLQT1 gene
1560	14152	26685	2.33	1.0E-39	AJ00345.1	NT	Homo sapiens KVLQT1 gene



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1578	14171	28700	9.78	1.0E-39	7657020	NT	Homo sapiens DKFZp434P211 protein (DKFZP434P211), mRNA
4719	17300	29745	0.87	1.0E-39	AW266073.1	EST_HUMAN	U1-HBW0-aliu-h-06-0-U1.s1 NCI CGAP_Sub6 Homo sapiens cDNA clone IMAGE:2730850 3'
4784	17345	29793	4.98	1.0E-39	AW951995.1	EST_HUMAN	EST364065 MAGe resequences, MAGB Homo sapiens cDNA
4784	17345	29794	4.98	1.0E-39	AW951995.1	EST_HUMAN	EST364065 MAGe resequences, MAGB Homo sapiens cDNA
4812	17390	29841	10.18	1.0E-39	7657020	NT	Homo sapiens DKFZp434P211 protein (DKFZP434P211), mRNA
5561	18192	30638	0.86	1.0E-39	11417342	NT	Homo sapiens sema domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 5A (SEMA5A), mRNA
5561	18192	30639	0.86	1.0E-39	11417342	NT	Homo sapiens sema domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 5A (SEMA5A), mRNA
5812	18436	31157	1.13	1.0E-39	T80876.1	EST_HUMAN	yt28g06.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:109402 5' similar to contains Alu repetitive element; contains LTR1 repetitive element
5845	18469	31184	5.75	1.0E-39	AJ278170.1	NT	Mus musculus mRNA for neuronal interacting factor X 1 (NIX1) (Nix1 gene)
5845	18469	31195	5.75	1.0E-39	AJ278170.1	NT	Mus musculus mRNA for neuronal interacting factor X 1 (NIX1) (Nix1 gene)
6914	19573		1.87	1.0E-39	11438738	NT	Homo sapiens tubby like protein 3 (TULP3), mRNA
7400	19925	32790	2.28	1.0E-39	D78132.1	NT	Homo sapiens mRNA for ras-related GTP-binding protein, complete cds
8489	21038	33959	0.85	1.0E-39	O48530	SWISSPROT	RIBONUCLEASE K8 PRECURSOR (RNAse K8)
12181	24401		4.3	1.0E-39	U07000.1	NT	Human breakpoint cluster region (BCR) gene, complete cds
581	13211	25689	2.07	9.0E-40	5803210	NT	Homo sapiens UDP-glucose pyrophosphorylase 2 (UGP2), mRNA
1278	13873	26392	20.54	9.0E-40	4755145	NT	Homo sapiens AE-binding protein 1 (AEBP1) mRNA
1278	13873	26393	20.54	9.0E-40	4755145	NT	Homo sapiens AE-binding protein 1 (AEBP1) mRNA
1498	14090	26630	1.54	9.0E-40	4507512	NT	Homo sapiens tissue inhibitor of metalloproteinase 3 (Sorsby fundus dystrophy, pseudoinflammatory) (TIMP3) mRNA
3853	16451	28914	0.68	9.0E-40	4503764	NT	Homo sapiens fragile X mental retardation 1 (FMR1) mRNA
4045	18004	29103	3.57	9.0E-40	AB033070.1	NT	Homo sapiens mRNA for KIAA1244 protein, partial cds
3077	15692	28168	1	8.0E-40	AA078165.1	EST_HUMAN	7H15A04 Chromosome 7 HeLa cDNA Library Homo sapiens cDNA clone 7H15A04
3986	16594		1.74	8.0E-40	BE398541.1	EST_HUMAN	601288958F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3619166 5'
7702	20211	33098	2.01	7.0E-40	U60325.1	NT	Human DNA polymerase gamma mRNA, nuclear gene encoding mitochondrial protein, complete cds
7702	20211	33099	2.01	7.0E-40	U60325.1	NT	Human DNA polymerase gamma mRNA, nuclear gene encoding mitochondrial protein, complete cds
10776	23300	36308	2.48	7.0E-40	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
2753	15308	27873	5.43	6.0E-40	AA361275.1	EST_HUMAN	EST70527 T-cell lymphoma Homo sapiens cDNA 5' end similar to zinc finger protein family

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2753	15308	27874	5.43	6.0E-40	AA361275.1	EST_HUMAN	EST70527 T-cell lymphoma Homo sapiens cDNA 5' end similar to zinc finger protein family
6094	18710		2.11	6.0E-40	BE504766.1	EST_HUMAN	h240g01.x1 NCI_CGAP_GC8 Homo sapiens cDNA clone IMAGE:3210480 3'
6296	18904		1.42	6.0E-40	7661998	NT	Homo sapiens KIAA0211 gene product (KIAA0211), mRNA
7015	19513	32334	4.18	6.0E-40	11439783	NT	Homo sapiens fatty acid desaturase 1 (FADS1), mRNA
7015	19513	32335	4.18	6.0E-40	11439783	NT	Homo sapiens fatty acid desaturase 1 (FADS1), mRNA
9887	22384	35360	8.69	6.0E-40	AV653028.1	EST_HUMAN	AV653028 GLC Homo sapiens cDNA clone GLCDGF04 3'
9887	22384	35361	8.69	6.0E-40	AV653028.1	EST_HUMAN	AV653028 GLC Homo sapiens cDNA clone GLCDGF04 3'
1919	14504	27081	1.42	4.0E-40	AI686005.1	EST_HUMAN	tt91b01.x1 NCI_CGAP_P128 Homo sapiens cDNA clone IMAGE:2248873 3' similar to TR:O73505 O73505 POL PROTEIN ;
2155	14732		1.38	4.0E-40	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
4478	17063	29513	9.28	4.0E-40	7682117	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
7827	20369	33277	0.59	4.0E-40	AU127831.1	EST_HUMAN	AU127831 NT2RP2 Homo sapiens cDNA clone NT2RP2002172 5'
7933	20475	33384	4.44	4.0E-40	AA742809.1	EST_HUMAN	nv34e10.r1 NCI_CGAP_Br4 Homo sapiens cDNA clone IMAGE:1222122
8985	21523	34451	3.91	4.0E-40	BE009416.1	EST_HUMAN	PMO-BND167-070500-002-h12 BND167 Homo sapiens cDNA
8985	21523	34452	3.91	4.0E-40	BE009416.1	EST_HUMAN	PMO-BND167-070500-002-h12 BND167 Homo sapiens cDNA
10595	23129	36143	3.06	4.0E-40	AW841585.1	EST_HUMAN	RC1-CN0017-120200-012-604 CN0017 Homo sapiens cDNA
4212	16801	29250	0.89	3.0E-40	AI925949.1	EST_HUMAN	wh12f07.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2380549 3'
6750	19343	32150	7.27	3.0E-40	11417342	NT	Homo sapiens sema domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 5A (SEMA5A), mRNA
8321	20862	33787	3.69	3.0E-40	5454167	NT	Homo sapiens HBV associated factor (XAP4) mRNA
8998	21437	34360	1.28	3.0E-40	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
9138	21873	34615	1.58	3.0E-40	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
10541	23078	36092	1.79	3.0E-40	D86984.1	NT	Human mRNA for KIAA0209 gene, partial cds
10903	23423	36442	2.21	3.0E-40	BE350127.1	EST_HUMAN	h09g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.b3
11145	23653	36695	13.89	3.0E-40	6005913	NT	MER29 repetitive element ;
						EST_HUMAN	Homo sapiens serine threonine protein kinase (NDR), mRNA
11445	23895	36960	1.58	3.0E-40	AW118799.1	EST_HUMAN	xd96h02.x1 Scores_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2605491 3' similar to TR:Q15804 Q15804 SIMILAR TO ENV OF TYPE A AND TYPE B RETROVIRUSES AND TO CLASS II HERVS ;
347	12998		4.35	2.0E-40	AI223036.1	EST_HUMAN	tg52h08.x1 Scores_testis_NHT Homo sapiens cDNA clone IMAGE:1838847 3'
827	13444		22.71	2.0E-40	AW303868.1	EST_HUMAN	xr24e10.x1 NCI_CGAP_U14 Homo sapiens cDNA clone IMAGE:2761098 3' similar to SW:RS5_MOUSE P97461 40S RIBOSOMAL PROTEIN S5 ;

Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1865	14451		1.38	2.0E-40	AV731801.1	EST_HUMAN	AV731801 HTF Homo sapiens cDNA clone HTFAZE05 5'
1978	14581	27119	1.39	2.0E-40	4508188	NT	Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 7 (PSMA7) mRNA, and translated products
1978	14581	27120	1.39	2.0E-40	4508188	NT	Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 7 (PSMA7) mRNA, and translated products
2116	14894	27262	0.95	2.0E-40	AI968582.1	EST_HUMAN	w80a11.x1 NCI_CGAP_G08 Homo sapiens cDNA clone IMAGE:2514716 3' similar to TR-Q91928 Q91928
2214	14789	27363	1.86	2.0E-40	5453592	NT	ZINC FINGER PROTEIN. ;
2714	15271		1.25	2.0E-40	BE275932.1	EST_HUMAN	Homo sapiens adenyl cyclase-associated protein 2 (CAP2) mRNA
3180	15774	28242	4.32	2.0E-40	5453592	NT	601121587F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3345784 5'
5027	17601	30048	1.84	2.0E-40	AL163280.2	NT	Homo sapiens adenyl cyclase-associated protein 2 (CAP2) mRNA
5027	17601	30047	1.84	2.0E-40	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
5378	17938	30351	3.28	2.0E-40	4505880	NT	Homo sapiens chromosome 21 segment HS21C080
916	13528		1.05	1.0E-40	AA225989.1	EST_HUMAN	Homo sapiens plasminogen (PLG) mRNA
3337	15947		1.47	1.0E-40	4507142	NT	nc08a09.s1 NCI_CGAP_Pri1 Homo sapiens cDNA clone IMAGE:1007608
4716	17297	28742	4.85	1.0E-40	4508012	NT	Homo sapiens sorting nexin 3 (SNX3) mRNA
6403	19006	31786	0.69	1.0E-40	W92708.1	EST_HUMAN	Homo sapiens zinc finger protein 200 (ZNF200) mRNA, and translated products
6403	19006	31787	0.69	1.0E-40	W92708.1	EST_HUMAN	zh79f11.s1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:418317 3'
7145	19878	32518	2.12	1.0E-40	AA573201.1	EST_HUMAN	zh79f11.s1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:418317 3'
7145	19878	32519	2.12	1.0E-40	AA573201.1	EST_HUMAN	n42704.s1 NCI_CGAP_AA1 Homo sapiens cDNA clone IMAGE:995167 3'
7283	19811	32667	0.83	1.0E-40	P28608	SWISSPROT	n42704.s1 NCI_CGAP_AA1 Homo sapiens cDNA clone IMAGE:995167 3'
10797	23320	36330	4.13	1.0E-40	AU149345.1	EST_HUMAN	POL POLYPROTEIN [CONTAINS: PROTEASE: REVERSE TRANSCRIPTASE: RIBONUCLEASE H]
11615	24057		1.72	1.0E-40	AL163246.2	NT	AU149345 NT2RM4 Homo sapiens cDNA clone NT2RM4002122 3'
12182	24956		7.52	1.0E-40	BF334112.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C046
3876	16474	28938	0.65	9.0E-41	W01598.1	EST_HUMAN	MR2-CT0222-211099-002-e10 CT0222 Homo sapiens cDNA
7882	20404	33311	1.68	8.0E-41	AL163203.2	NT	za36a02.r1 Soares_fetal_liver_spleen_INFLS Homo sapiens cDNA clone IMAGE:284802 5'
861	15427	25990	1.58	7.0E-41	AI934364.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C003
861	15427	25991	1.58	7.0E-41	AI934364.1	EST_HUMAN	wp04h04.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2463895 3'
5411	17968	30377	0.95	7.0E-41	11431114	NT	wp04h04.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2463895 3'
5489	18103	30422	0.84	7.0E-41	11545770	NT	Homo sapiens hypothetical protein (FLJ10998), mRNA
6159	18772	31535	3.44	7.0E-41	11419208	NT	Homo sapiens hypothetical protein FLJ13188 (FLJ13188), mRNA
6494	19095	31879	0.8	7.0E-41	11433010	NT	Homo sapiens a disintegrin and metalloproteinase domain 22 (ADAM22), mRNA
7087	18086	30442	0.95	7.0E-41	U72335.1	NT	Homo sapiens IQ motif containing GTPase activating protein 1 (IQGAP1), mRNA
							Human platelet activating factor acetylhydrolase, brain isoform, 45 kDa subunit (LIS1) gene, exons 3 and 4

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11311	23804	36864	1.98	7.0E-41	4758445	NT	Homo sapiens guanine nucleotide binding protein 10 (GNG10) mRNA
12631	24952		8.97	7.0E-41	11417972	NT	Homo sapiens pescadillo (zebrafish) homolog 1, containing BRCT domain (PES1), mRNA
302	12957	25447	1.42	6.0E-41	AB037163.1	NT	Homo sapiens DSCR5b mRNA, complete cds
2157	14734	27307	2.33	6.0E-41	7657042	NT	Homo sapiens Down syndrome candidate region 1 (DSOR1), mRNA
7912	20454	33360	1.58	6.0E-41	BF513783.1	EST_HUMAN	U1-H-BW1-amp-b-03-0-U1.s1 NC1_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3070421 3'
12611	24873		1.61	6.0E-41	AW673637.1	EST_HUMAN	h064f08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:3042183 3' similar to contains
1838	14426	26977	2.16	5.0E-41	T62628.1	EST_HUMAN	MER32.b3 MER32 repetitive element
4184	16774		1.01	5.0E-41	4885636	NT	yc03e10.s1 Stralagene lung (#937210) Homo sapiens cDNA clone IMAGE:79626 3'
6667	19263		1.97	5.0E-41	BE067042.1	EST_HUMAN	Homo sapiens target of myb1 (chicken) homolog (TOM1), mRNA
414	13049		1.58	4.0E-41	BE156318.1	EST_HUMAN	PM4-BT0341-251199-002-F11 BT0341 Homo sapiens cDNA
1137	13740	26249	1.12	4.0E-41	AU119344.1	EST_HUMAN	QV0-HT0367-150200-114-g09 HT0367 Homo sapiens cDNA
1455	14047	26577	9.23	4.0E-41	A1027117.1	EST_HUMAN	AU119344 HEMBA1 Homo sapiens cDNA clone HEMBA1005583 5'
1455	14047	26578	9.23	4.0E-41	A1027117.1	EST_HUMAN	ow45e06.s1 Soares_parathyroid_tumor_Nbh-PA Homo sapiens cDNA clone IMAGE:1849794 3' similar to TR:O00597 O00597 CYTOCHROME C-LIKE POLYPEPTIDE, contains LTR5.b1 LTR5 repetitive element ;
1469	14061	26596	1.67	4.0E-41	AB008881.1	NT	ow45e06.s1 Soares_parathyroid_tumor_Nbh-PA Homo sapiens cDNA clone IMAGE:1849794 3' similar to TR:O00597 O00597 CYTOCHROME C-LIKE POLYPEPTIDE, contains LTR5.b1 LTR5 repetitive element ;
1677	14269	26802	8.43	4.0E-41	A1500406.1	EST_HUMAN	Homo sapiens gene for activin receptor type IIB, complete cds hm86c04.x1 NC1_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2165958 3' similar to contains OFR.b1 OFR repetitive element ;
2913	15530	28001	3.73	4.0E-41	A1228041.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22; segment 1/3
2913	15530	28002	3.73	4.0E-41	A1228041.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22; segment 1/3
4225	16813	29260	2.27	4.0E-41	X92985.1	NT	H.sapiens DNase I hypersensitive site (HSS-3) enhancer element
6632	19228		1.36	4.0E-41	AV758295.1	EST_HUMAN	AV758295 BM Homo sapiens cDNA clone BMFBHC06 5'
9910	22110	35072	6.75	4.0E-41	BF304683.1	EST_HUMAN	60188096F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4122119 5'
11522	23970		9.87	4.0E-41	AV710480.1	EST_HUMAN	AV710480 Cu Homo sapiens cDNA clone CuAAC007 5'
12375	24841		2.28	4.0E-41	AV709431.1	EST_HUMAN	AV708431 ADC Homo sapiens cDNA clone ADCARE02 5'
12570	24669	30875	4.65	4.0E-41	BE887118.1	EST_HUMAN	601508315F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3910059 5'
983	13595	26109	1.64	3.0E-41	AB030176.1	NT	Homo sapiens PAD-H19 mRNA for peptidylarginine deiminase type II, complete cds Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
4428	17014	29456	2.7	3.0E-41	AB026898.1	NT	Homo sapiens mRNA for KIAA1327 protein, partial cds
5273	17834		1.03	3.0E-41	AB037748.1	NT	Homo sapiens mRNA for putative p64 CLOP protein
5883	18310	30805	9.55	3.0E-41	X87689.1	NT	H.sapiens mRNA for putative p64 CLOP protein

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6518	19118	31909	1.73	3.0E-41	AB037808.1	NT	Homo sapiens mRNA for KIAA1387 protein, partial cds
7761	20269	33167	0.7	3.0E-41	RS4785.1	EST_HUMAN	J75408.r1 Soares breast 2NbhBst Homo sapiens cDNA clone IMAGE:154575 5'
11575	24021	37080	1.78	3.0E-41	AI22804.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 1/3
11703	24116		1.84	3.0E-41	AA609768.1	EST_HUMAN	af177110.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1031947 3'
1864	14200	26734	15.09	2.0E-41	U43701.1	NT	Human ribosomal protein L23a mRNA, complete cds
2001	14593	27142	1.76	2.0E-41	AA331940.1	EST_HUMAN	EST35818 Embryo, 8 week 1 Homo sapiens cDNA 5' end
2260	14834	27412	1.13	2.0E-41	D86982.1	NT	Human mRNA for KIAA0207 gene, complete cds
2308	14890	27456	3.79	2.0E-41	X8963.1	NT	G gorilla DNA for ZNF80 gene homolog
2855	14200	26734	10.67	2.0E-41	U43701.1	NT	Human ribosomal protein L23a mRNA, complete cds
4728	17309	26753	2.07	2.0E-41	AL163267.2	NT	Homo sapiens chromosome 21 segment HS21C087
4728	17309	26754	2.07	2.0E-41	AL163267.2	NT	Homo sapiens chromosome 21 segment HS21C087
7686	20178	33065	6.67	2.0E-41	AF038404.1	NT	Homo sapiens homolog of Nedd5 (Nedd5) mRNA, complete cds
8013	20555	33458	1.36	2.0E-41	M96944.1	NT	Human B-cell specific transcription factor (BSAP) mRNA, complete cds
8013	20555	33459	1.36	2.0E-41	M96944.1	NT	Human B-cell specific transcription factor (BSAP) mRNA, complete cds
8040	20582	33489	1.59	2.0E-41	AA328285.1	EST_HUMAN	EST31723 Embryo, 12 week 1 Homo sapiens cDNA 5' end
8905	21443	34368	1.61	2.0E-41	P52742	SWISSPROT	ZINC FINGER PROTEIN 135
9338	21862	34800	0.74	2.0E-41	11417118	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
9338	21862	34801	0.74	2.0E-41	11417118	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
11359	23813	36873	3.76	2.0E-41	AA372637.1	EST_HUMAN	EST84555 Cdon adenocarcinoma IV Homo sapiens cDNA 5' end
3240	15852	28333	1.11	1.0E-41	BE869735.1	EST_HUMAN	601445647F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3849803 5'
3240	15852	28334	1.11	1.0E-41	BE869735.1	EST_HUMAN	601445647F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3849803 5'
4686	17248	29701	11.21	1.0E-41	6878468	NT	Mus musculus tubulin alpha 6 (Tub66), mRNA
9339	21853	34802	1.62	1.0E-41	AI217868.1	EST_HUMAN	q175c10.x1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1755658 3'
11039	23553	36588	2.41	1.0E-41	AW847812.1	EST_HUMAN	IL3-CT0213-190200-040-F09 CT0213 Homo sapiens cDNA
11842	24204		2.37	1.0E-41	11526291	NT	Homo sapiens hypothetical protein FLJ20454 (FLJ20454), mRNA
9457	20997		1.34	9.0E-42	BE179191.1	EST_HUMAN	RCO-HIT0613-210300-032-g01 HIT0613 Homo sapiens cDNA
9101	21637	34575	2.43	9.0E-42	11560151	NT	Homo sapiens hypothetical C2H2 zinc finger protein FLJ22504 (FLJ22504), mRNA
9101	21637	34576	2.43	9.0E-42	11560151	NT	Homo sapiens hypothetical C2H2 zinc finger protein FLJ22504 (FLJ22504), mRNA
488	13121	25607	7.59	8.0E-42	AF003530.1	NT	Homo sapiens homeobox protein CDX4 (CDX4) gene, complete cds and flanking repeat regions
11881	24959		53.38	8.0E-42	AA493896.1	EST_HUMAN	nh07c02.s1 NCL_CGAP_Thy1 Homo sapiens cDNA clone IMAGE:943586 similar to TR:G434304 G434304 367BP EXPRESSED SEQUENCE TAG MRNA :
11900	24830		2.62	8.0E-42	AW089062.1	EST_HUMAN	xc97a04.x1 NCI_CGAP_Brn35 Homo sapiens cDNA clone IMAGE:2592174 3' similar to contains OFR.12 OFR repetitive element :
967	13578		2.5	7.0E-42	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8406	20946		0.62	7.0E-42	R10963.1	EST_HUMAN	yf38g04.r1 Soares fetal liver spleen 1NfLS Homo sapiens cDNA clone IMAGE:129174 5'
9168	21745	34688	1.99	7.0E-42	AJ204358.1	EST_HUMAN	qf58g12.x1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1754278 3'
11052	23565	36600	1.59	7.0E-42	AA569592.1	EST_HUMAN	mf23g07.s1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:914652
11052	23565	36601	1.59	7.0E-42	AA569592.1	EST_HUMAN	mf23g07.s1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:914652
1896	14481	27039	4.44	6.0E-42	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (p4K230) mRNA, complete cds
1896	14481	27040	4.44	6.0E-42	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (p4K230) mRNA, complete cds
2328	14899		3.36	6.0E-42	AW238656.1	EST_HUMAN	xp29f08.x1 NCI_CGAP_HN10 Homo sapiens cDNA clone IMAGE:2741799 3' similar to contains L1.1 L1 repetitive element
5659	18286	30764	1.48	6.0E-42	AB028990.1	NT	Homo sapiens mRNA for KIAA1067 protein, partial cds
5893	18286	30764	1.5	6.0E-42	AB028990.1	NT	Homo sapiens mRNA for KIAA1067 protein, partial cds
141	12806		6.21	5.0E-42	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
483	13097	25588	1.39	5.0E-42	BE217913.1	EST_HUMAN	hy31e11.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3175052 3'
512	13145		4.36	5.0E-42	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
513	13146		2.72	5.0E-42	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
6788	19379	32194	1.23	5.0E-42	11433063	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A), mRNA
6788	19379	32195	1.23	5.0E-42	11433063	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A), mRNA
6893	19627	32484	2.58	5.0E-42	11417957	NT	Homo sapiens myotubularin related protein 3 (MTMR3), mRNA
7253	19781	32837	1.64	5.0E-42	AF071569.1	NT	Homo sapiens multifunctional calcium/calmodulin-dependent protein kinase II delta2 isoform mRNA, complete cds
8713	21252	34174	2.85	5.0E-42	AB037715.1	NT	Homo sapiens mRNA for KIAA1284 protein, partial cds
10495	22969	35997	0.6	5.0E-42	11431168	NT	Homo sapiens 3-hydroxyanthranilate 3,4-dioxygenase (HAAO), mRNA
10495	22969	35998	0.6	5.0E-42	11431168	NT	Homo sapiens 3-hydroxyanthranilate 3,4-dioxygenase (HAAO), mRNA
10877	23398	36415	1.92	5.0E-42	8923162	NT	Homo sapiens hypothetical protein FLJ20163 (FLJ20163), mRNA
783	13402	25905	7.93	4.0E-42	AF055066.1	NT	Homo sapiens MHC class 1 region
783	13402	25906	7.93	4.0E-42	AF055066.1	NT	Homo sapiens MHC class 1 region
1104	13708	26217	2.39	4.0E-42	AF189011.1	NT	Homo sapiens ribonuclease III (RN3), mRNA, complete cds
4272	16858	29307	1.46	4.0E-42	X59417.1	NT	H. sapiens PROS-27 mRNA
4335	16922	29364	5.27	4.0E-42	4506496	NT	Homo sapiens regulatory factor X, 4 (influences HLA class II expression) (RFX4) mRNA
4683	17265	29715	13.42	4.0E-42	4508008	NT	Homo sapiens zinc finger protein 177 (ZNF177) mRNA
5353	17913	30328	0.94	4.0E-42	7661635	NT	Homo sapiens DKFZP584O2082 protein (DKFZP584O2082), mRNA
10378	22872	35865	0.46	4.0E-42	AW371201.1	EST_HUMAN	GM0-BT0282-171299-127-B03 BT0282 Homo sapiens cDNA
10528	23065	36076	1.76	4.0E-42	AW818630.1	EST_HUMAN	RC1-ST0278-040400-018-h11 ST0278 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10528	23085	36077	1.76	4.0E-42	AW818630.1	EST_HUMAN	RC1-ST0278-040400-018-h11 ST0278 Homo sapiens cDNA
11280	23742	36799	3.45	4.0E-42	BF035327.1	EST_HUMAN	601458531F1 NIH_MGC_86 Homo sapiens cDNA clone IMAGE:3862086 5'
1530	14122	26661	4.49	2.0E-42	BF376834.1	EST_HUMAN	RC0-TN0078-110900-024-q07 TN0078 Homo sapiens cDNA
2436	16003	27575	0.92	2.0E-42	AV690218.1	EST_HUMAN	AV690218 GKC Homo sapiens cDNA clone GKCCB808 5'
2456	15023		2.69	2.0E-42	AW898344.1	EST_HUMAN	RC3-NN0070-270400-011-h10 NN0070 Homo sapiens cDNA
2469	15036	27603	2.41	2.0E-42	AW250059.1	EST_HUMAN	2819293.3prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2819293 3'
5931	18553	31279	13.21	2.0E-42	AW955388.1	EST_HUMAN	EST367438 MAGC resequences, MAGC Homo sapiens cDNA
5931	18553	31280	13.21	2.0E-42	AW955388.1	EST_HUMAN	EST367438 MAGC resequences, MAGC Homo sapiens cDNA
6849	18439	32253	0.84	2.0E-42	A052586.1	EST_HUMAN	ow83d05.x1 Soares fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1653417 3'
9755	22253	35235	1.1	2.0E-42	BE538918.1	EST_HUMAN	601061284F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3447620 5'
9667	22462	35445	0.53	2.0E-42	P81649	SWISSPROT	RIBONUCLEASE K3 (RNASE K3)
9667	22462	35446	0.53	2.0E-42	P81649	SWISSPROT	RIBONUCLEASE K3 (RNASE K3)
11585	24030	37100	1.55	2.0E-42	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
763	13381	25880	1.52	1.0E-42	X57147.1	NT	Human endogenous retrovirus pH:1 (ERV8)
1080	13685	26197	0.84	1.0E-42	AW285809.1	EST_HUMAN	U1-H-B11-efh-e-04-0-U1.s1 NCJ_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2721871 3'
1140	13743	26252	2.08	1.0E-42	AJ251818.1	NT	Homo sapiens partial C9 gene for complement component C9, exon 1
1140	13743	26253	2.08	1.0E-42	AJ251818.1	NT	Homo sapiens partial C9 gene for complement component C9, exon 1
1285	15437	26404	10.72	1.0E-42	AF067166.1	NT	Homo sapiens NADH-ubiquinone oxidoreductase AGGG subunit precursor homolog mRNA, nuclear gene encoding mitochondrial protein, complete cds
1285	15437	26405	10.72	1.0E-42	AF067166.1	NT	Homo sapiens NADH-ubiquinone oxidoreductase AGGG subunit precursor homolog mRNA, nuclear gene encoding mitochondrial protein, complete cds
1738	14328	26872	1.86	1.0E-42	11423219	NT	Homo sapiens rec (LOC51201), mRNA
2581	15144	27712	5.25	1.0E-42	5174458	NT	Homo sapiens major histocompatibility complex, class II, DM alpha (HLA-DMA) mRNA
2991	15607	28087	6.58	1.0E-42	4505524	NT	Homo sapiens origin recognition complex, subunit 5 (yeast homolog)-like (ORCSL) mRNA, and translated products
3770	18371	28836	2.85	1.0E-42	7662027	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
3862	16460	28924	0.83	1.0E-42	5031610	NT	Homo sapiens Golgi vesicular membrane trafficking protein p18 (BE11) mRNA
3869	16597	29069	1.07	1.0E-42	AL163267.2	NT	Homo sapiens chromosome 21 segment HS21C087
4331	16918	29361	1.92	1.0E-42	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
4697	17279	29725	0.86	1.0E-42	AW813617.1	EST_HUMAN	RC3-ST0197-161099-012-a03 ST0197 Homo sapiens cDNA
4856	17434	29885	2.65	1.0E-42	5803122	NT	Homo sapiens proteasome inhibitor (PI31), mRNA
4856	17434	29886	2.65	1.0E-42	5803122	NT	Homo sapiens proteasome inhibitor (PI31), mRNA
4893	17468	29924	6.23	1.0E-42	4506758	NT	Homo sapiens ryanodine receptor 3 (RYR3) mRNA
5274	17835	30260	1.48	1.0E-42	4501912	NT	Homo sapiens a disintegrin and metalloproteinase domain 23 (ADAM23) mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5274	17835	30281	1.48	1.0E-42	4501912	NT	Homo sapiens a disintegrin and metalloproteinase domain 23 (ADAM23) mRNA
9998	22493	35482	3.35	9.0E-43	4757969	NT	Homo sapiens chromodomain protein, Y chromosome-like (CDYL) mRNA
10916	23435	36455	3.57	9.0E-43	AA435719.1	EST_HUMAN	Z179a07.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:728532 3'
680	13304	25786	22.52	8.0E-43	AV736824.1	EST_HUMAN	AV736824 CB Homo sapiens cDNA clone CBLAKH08 5'
680	13304	25787	22.52	8.0E-43	AV736824.1	EST_HUMAN	AV736824 CB Homo sapiens cDNA clone CBLAKH08 5'
729	13349	25841	7.38	8.0E-43	8923276	NT	Homo sapiens hypothetical protein FLJ20297 (FLJ20297), mRNA
729	13349	25842	7.38	8.0E-43	8923276	NT	Homo sapiens hypothetical protein FLJ20297 (FLJ20297), mRNA
729	13349	25843	7.38	8.0E-43	8923276	NT	Homo sapiens hypothetical protein FLJ20297 (FLJ20297), mRNA
5877	18499	31225	0.82	8.0E-43	H13952.1	EST_HUMAN	y08e11.1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:148172 5'
3703	16304	28772	7.6	7.0E-43	AW246442.1	EST_HUMAN	282251.Sprime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:282251 5'
5414	17971	30381	1.1	7.0E-43	AA989045.1	EST_HUMAN	or88a07.s1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1602900 3' similar to contains LTR8.b3 LTR8 repetitive element;
5414	17971	30382	1.1	7.0E-43	AA989045.1	EST_HUMAN	or88a07.s1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1602900 3' similar to contains LTR8.b3 LTR8 repetitive element;
8704	21243		3.4	7.0E-43	A1936748.1	EST_HUMAN	wp69b01.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2466385 3' similar to TR:O15475 O15475 UNNAMED HERV-H PROTEIN ;contains LTR7.b1 LTR7 repetitive element ;
1388	13982		9.98	6.0E-43	AA491890.1	EST_HUMAN	ne72406.s1 NCI_CGAP_Ew1 Homo sapiens cDNA clone IMAGE:909803 similar to gb.L05095 60S RIBOSOMAL PROTEIN L30 (HUMAN);
2628	15190		2.44	6.0E-43	AV708201.1	EST_HUMAN	AV708201 ADC Homo sapiens cDNA clone ADCACC10 5'
6453	18054	31839	2.54	6.0E-43	9855973	NT	Homo sapiens ATP-binding cassette, sub-family C (CFTR/MRP), member 3 (ABCC3), transcript variant MRP3B, mRNA
6988	19486	32308	2.15	6.0E-43	AW468897.1	EST_HUMAN	hd30b04.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2910891 3' similar to contains MER1.13 MER1 repetitive element ;
9765	22263	35246	2.2	6.0E-43	AA195154.1	EST_HUMAN	z35e08.r1 Soares_NIHMPu_S1 Homo sapiens cDNA clone IMAGE:665410 5' similar to TR:G528641 G528641 DB1, COMPLETE CDS ; contains element PTR7 repetitive element ;
10980	23494		6.53	6.0E-43	AL119158.1	EST_HUMAN	DKFZp761L1712.r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761L1712 5'
149	12812		1.7	5.0E-43	AL163213.2	NT	Homo sapiens chromosome 21 segment HS21C013
528	13160	25641	3.37	5.0E-43	AA382780.1	EST_HUMAN	EST968033 Testis I Homo sapiens cDNA 5' end
2872	15490	27961	1.18	5.0E-43	AV732578.1	EST_HUMAN	AV732578 HTF Homo sapiens cDNA clone HTFANC06 5'
6447	19481	32302	1.23	5.0E-43	A1613509.1	EST_HUMAN	tw22e07.x1 NCI_CGAP_Brn52 Homo sapiens cDNA clone IMAGE:2260452 3'
6883	19481	32302	0.77	5.0E-43	A1613509.1	EST_HUMAN	tw22e07.x1 NCI_CGAP_Brn52 Homo sapiens cDNA clone IMAGE:2260452 3'
8812	21351		0.49	5.0E-43	H74277.1	EST_HUMAN	y449g12.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:229510 5'
9286	21866	34831	3.67	5.0E-43	AA465288.1	EST_HUMAN	aa33408.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:815055 5'



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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10297	22781	35781	2.17	5.0E-43	AI733244.1	EST_HUMAN	0052c10.x5 NCL_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1569810 3' similar to TR:P90591 P90591 PV14 GENE.
10332	22828	35821	2.14	5.0E-43	AL049110.1	EST_HUMAN	DKFZp434D0119 r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434D0119
10644	23176	36189	5.05	5.0E-43	AW863007.1	EST_HUMAN	MR2-SN0007-280400-004-c02 SN0007 Homo sapiens cDNA
10850	23371	36390	4.1	5.0E-43	W28011.1	EST_HUMAN	55a4 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
11332	23030	36039	1.71	5.0E-43	X15804.1	NT	Human mRNA for alpha-actinin
1008	15390	26133	5.38	4.0E-43	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
5464	18099	30417	0.88	4.0E-43	AI056338.1	EST_HUMAN	0y47h03.x1 NCL_CGAP_Bm23 Homo sapiens cDNA clone IMAGE:1669013 3'
6507	19107	31892	0.82	4.0E-43	6996009	NT	Homo sapiens glycyl-RNA synthetase (GARS), mRNA
7184	19716		2.22	4.0E-43	11416793	NT	Homo sapiens protocadherin beta 6 (PCDH6), mRNA
8118	20659	33568	4.54	4.0E-43	AI244341.1	EST_HUMAN	q176a02.x1 NCL_CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1865354 3' similar to contains MER10.13
8118	20659	33568	4.54	4.0E-43	AI244341.1	EST_HUMAN	MER10 repetitive element.
8118	20659	33568	4.54	4.0E-43	AI244341.1	EST_HUMAN	MER10 repetitive element.
10217	22712	35704	1.33	4.0E-43	6005967	NT	Homo sapiens zinc finger protein 161 (ZNF161), mRNA
11184	23699	36736	1.68	4.0E-43	T77380.1	EST_HUMAN	y072h10.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:113827 5'
11819	24189		4.47	4.0E-43	R20950.1	EST_HUMAN	y06b05.r1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:31363 5' similar to contains MER10 repetitive element.
1265	13852		3.54	3.0E-43	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
1733	14324	28866	1.8	3.0E-43	X97869.1	NT	H. sapiens gene encoding La autoantigen
2176	14763	27323	1.15	3.0E-43	AJ276230.1	NT	Homo sapiens mRNA for partial phospholipase D1, splice variant PLD1a/b2
3630	16233	28708	1.25	3.0E-43	S69002.1	NT	AML1-EVI-1=AML1-EVI-1 fusion protein (rearranged translocation) [human, leukemic cell line SKH1, mRNA Mutant, 5938 nt]
4378	16865	29411	0.9	3.0E-43	AA548154.1	EST_HUMAN	nk55d06.s1 NCL_CGAP_P17 Homo sapiens cDNA clone IMAGE:1017419
6498	19099	31883	2.08	3.0E-43	7305360	NT	Mus musculus ologelin (Olog), mRNA
6498	19099	31884	2.08	3.0E-43	7305360	NT	Mus musculus ologelin (Olog), mRNA
6827	19417	32233	3.71	3.0E-43	U65487.1	NT	Human ribosomal RNA upstream binding transcription factor (UBTF) gene, partial cds
8104	20645		8.03	3.0E-43	AA458824.1	EST_HUMAN	aa88f11.s1 Stragene fetal retina 937202 Homo sapiens cDNA clone IMAGE:838413 3' similar to contains THR12 THR repetitive element.
8754	21293	34213	1.59	3.0E-43	7661721	NT	Homo sapiens hypothetical protein (HSA011916), mRNA
9778	22276	35261	0.77	3.0E-43	11420217	NT	Homo sapiens similar to ornithine carbamoyltransferase (H. sapiens) (LOC63648), mRNA
11572	24019	37089	2.6	3.0E-43	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
186	12856		9.15	2.0E-43	A1180784.1	EST_HUMAN	q051c09.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1733968 3' similar to contains PTR7.13
6601	19198	32003	0.95	2.0E-43	BE222778.1	EST_HUMAN	PTR7 PTR7 repetitive element ; hu53a08.x1 NCL_CGAP_Bm41 Homo sapiens cDNA clone IMAGE:3173750 3' similar to contains element MER40 repetitive element ;
6601	19198	32004	0.95	2.0E-43	BE222778.1	EST_HUMAN	hu53a08.x1 NCL_CGAP_Bm41 Homo sapiens cDNA clone IMAGE:3173750 3' similar to contains element MER40 repetitive element ;
7320	19847	32707	1.12	2.0E-43	AW207390.1	EST_HUMAN	U1H-B11-af1-a-09-0-U1.s1 NCL_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2721712 3'
8250	20791		9.58	2.0E-43	U43701.1	NT	Human ribosomal protein L23a mRNA, complete cds
11079	23591		3.66	2.0E-43	T03007.1	EST_HUMAN	FB1G5 Fetal brain, Stratagene Homo sapiens cDNA clone FB1G5 3'end similar to LINE-1
1690	14282	26817	2.54	1.0E-43	AF154836.1	NT	Homo sapiens Ras-like GTP-binding protein (RAB27A) gene, exons 1b and 2
1690	14282	26818	2.54	1.0E-43	AF154836.1	NT	Homo sapiens Ras-like GTP-binding protein (RAB27A) gene, exons 1b and 2
1743	14333	26879	1.63	1.0E-43	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
2750	15305	27869	4.08	1.0E-43	BF348283.1	EST_HUMAN	602022313F1 NCL_CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4157666 5'
6723	19317	32120	9.22	1.0E-43	4507168	NT	Homo sapiens Sp4 transcription factor (SP4) mRNA
6723	19317	32121	9.22	1.0E-43	4507168	NT	Homo sapiens Sp4 transcription factor (SP4) mRNA
7046	18066	30456	1.8	1.0E-43	R19751.1	EST_HUMAN	Yg40e01.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:34732 5' similar to
7873	20415	33323	1.04	1.0E-43	AF175265.1	NT	SP-BD38_MOUSE P28656 BRAIN PROTEIN DN38 ;
8010	20552		2.79	1.0E-43	AF198490.1	NT	Homo sapiens vacuolar sorting protein 35 (VPS35) mRNA, complete cds
8771	21310	34233	26.95	1.0E-43	AW963676.1	EST_HUMAN	Homo sapiens 8q22.1 region and MTG8 (CBFA2T1) gene, partial cds
10191	22686	35679	0.65	1.0E-43	AW953229.1	EST_HUMAN	EST375749 MAGE resequences, MAGH Homo sapiens cDNA
10843	23364	36380	8.02	1.0E-43	A1984961.1	EST_HUMAN	EST365299 MAGE resequences, MAGB Homo sapiens cDNA
11244	23774	36831	3.74	1.0E-43	11424378	NT	wr87h01.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2494705 3'
11757	24152		1.95	1.0E-43	AL137884.1	EST_HUMAN	Homo sapiens calcium channel, voltage-dependent, alpha 1E subunit (CACNA1E), mRNA
12054	24337	30988	3.9	1.0E-43	A1675416.1	EST_HUMAN	DKFZp761D1015_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761D1015 5'
12286	24488	30942	4.3	9.0E-44	11418322	NT	wb99b04.x1 NCL_CGAP_P28 Homo sapiens cDNA clone IMAGE:2313775 3'
923	13536	26054	5.83	8.0E-44	A1222985.1	EST_HUMAN	Homo sapiens cadherin EGF LAG seven-pass G-type receptor 1 (CELSR1), mRNA
923	13536	26055	5.83	8.0E-44	A1222985.1	EST_HUMAN	q123g01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1845552 3'
5424	17981	30388	0.69	8.0E-44	A1381520.1	EST_HUMAN	q123g01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1845552 3'
8476	21015	33931	2.74	8.0E-44	X94354.1	NT	q123g01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1845552 3'
11043	23557	36593	3.86	8.0E-44	Y10498.2	NT	te76c08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2092622 3' similar to TR:P93107
11536	23884	37056	1.86	8.0E-44	L29139.1	NT	P93107 PF20 ;
12008	24310	30992	2.76	8.0E-44	11527389	NT	H.sapiens DNA for Cone cGMP-PDE gene
							Homo sapiens mRNA for thymidine kinase, partial
							Homo sapiens myosin mRNA, partial cds
							Homo sapiens polymerase (RNA) II (DNA directed) polypeptide F (POLR2F), mRNA

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
12419	24859	30703	2.39	8.0E-44	11418099	NT	Homo sapiens protein kinase C, alpha binding protein (PRKCABP), mRNA
687	13311		0.83	7.0E-44	R06035.1	EST_HUMAN	ye89601.r1 Soares fetal liver spleen 1NLS Homo sapiens cDNA clone IMAGE:124920 5'
2276	14850	27428	1.12	7.0E-44	5031886	NT	Homo sapiens LIM domain-containing preferred translocation partner in lipoma (LPP) mRNA
2993	15609	28088	2.84	7.0E-44	AF048729.1	NT	Homo sapiens minisatellite ms32 repeat region
2993	15609	28088	2.84	7.0E-44	AF048729.1	NT	Homo sapiens minisatellite ms32 repeat region
3928	16527	28994	2.76	7.0E-44	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
4326	16912	28354	0.96	7.0E-44	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
4326	16912	28355	0.96	7.0E-44	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
8126	20687	33576	6.38	7.0E-44	AU159839.1	EST_HUMAN	Homo sapiens cDNA clone Y79AA1000498 3'
6252	18861	31633	0.77	6.0E-44	Z20946.1	EST_HUMAN	HSAADEYU P. Human foetal Brain White tissue Homo sapiens cDNA
11611	24054	37118	2.92	6.0E-44	AW954050.1	EST_HUMAN	EST366120 MAGC resequences, MAGC Homo sapiens cDNA
325	12879		3.12	5.0E-44	AJ289880.1	NT	Homo sapiens KIAA0851 gene (partial), X13 gene and LZTFL1 gene
354	13003		1.75	5.0E-44	AJ289880.1	NT	Homo sapiens KIAA0851 gene (partial), X13 gene and LZTFL1 gene
7829	20371	33278	3.5	5.0E-44	A1588523.1	EST_HUMAN	tn40402.x1 NCI CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2170083 3' similar to contains OFR.11
9306	21908		1.85	5.0E-44	AU124571.1	EST_HUMAN	OFR OFR repetitive element ;
3461	16088	28541	2.18	4.0E-44	AL163303.2	NT	AU124571 NT2RM4 Homo sapiens cDNA clone NT2RM4000218 5'
5158	17727		1.16	4.0E-44	A1435225.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C103
8215	20756	33670	0.76	4.0E-44	L21948.1	NT	ti11d02.x1 NCI CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2130147 3'
8811	21350		0.54	4.0E-44	BE176618.1	EST_HUMAN	Human fibrillin (FBN1) locus polymorphism
11117	23628	36668	7.04	4.0E-44	U90878.1	NT	RC3-HT0585-010403-023-408 HT0585 Homo sapiens cDNA
1821	14410		1.09	3.0E-44		NT	Homo sapiens carboxyl terminal LIM domain protein (CLIM1) mRNA, complete cds
3132	15746	28215	5.8	3.0E-44	AA169851.1	EST_HUMAN	Homo sapiens karyopherin alpha 6 (importin alpha 7) (KPNA6), mRNA
3959	16557	29028	2.84	3.0E-44	AA337234.1	EST_HUMAN	zp18b05.r1 Stralagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:609777 5'
5404	17662	30373	2.57	3.0E-44	BF691060.1	EST_HUMAN	EST42299 Endometrial tumor Homo sapiens cDNA 5' end similar to similar to alpha-1-antitrypsinase F
9438	21984	34913	0.56	3.0E-44	AF005273.1	NT	602247109F1 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:4332185 5'
1087	13692	26201	2.13	2.0E-44	4826685	NT	Sus scrofa domestica submaxillary apomucin mRNA, complete cds
1087	13692	26202	2.13	2.0E-44	4826685	NT	Homo sapiens DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 1 (DDX1) mRNA
1249	13846	26363	2.99	2.0E-44	5803200	NT	Homo sapiens DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 1 (DDX1) mRNA
1249	13846	26364	2.99	2.0E-44	5803200	NT	Homo sapiens transmembrane trafficking protein (TMP21), mRNA
1355	13949	26475	4.41	2.0E-44	AF133588.1	NT	Homo sapiens transmembrane trafficking protein (TMP21), mRNA
1412	14005	28533	1.38	2.0E-44	BE465325.1	EST_HUMAN	Homo sapiens RAB38 (RAB38) mRNA, complete cds
							hw14q06.x1 NCI CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3182838 3' similar to SW:OXYB_HUMAN
							P22059 OXYSTEROL-BINDING PROTEIN. ;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2196	14772	27346	1.71	2.0E-44	AF070651.1	NT	Homo sapiens tissue-type bone marrow zinc finger protein 4 mRNA, complete cds
2841	15200		2.07	2.0E-44	5901833	NT	Homo sapiens adaptor-related protein complex 4, sigma 1 subunit (CLAPS4), mRNA
3517	16122	28602	1.34	2.0E-44	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
4669	17251	29703	1.86	2.0E-44	AW864379.1	EST_HUMAN	PM4-SN0016-120500-003-g04 SN0016 Homo sapiens cDNA
5441	17998	30401	1.08	2.0E-44	4506378	NT	Homo sapiens mitogen-activated protein kinase kinase kinase 3 (MAP4K3), mRNA
6245	18854	31625	1.71	2.0E-44	11449901	NT	Homo sapiens chemokine (C-C motif) receptor 8 (CCR8), mRNA
6941	18049	30471	1.05	2.0E-44	AF038968.1	NT	Homo sapiens general transcription factor 2-1 (GTF2I) mRNA, alternatively spliced product, complete cds
7444	19668	32835	4.03	2.0E-44	11419226	NT	Homo sapiens glutamate receptor, metabotropic 3 (GRM3), mRNA
7444	19668	32836	4.03	2.0E-44	11419226	NT	Homo sapiens glutamate receptor, metabotropic 3 (GRM3), mRNA
8367	20907	33825	0.85	2.0E-44	7706370	NT	Homo sapiens vesicle transport-related protein (KIAA0917), mRNA
8367	20907	33826	0.85	2.0E-44	7706370	NT	Homo sapiens vesicle transport-related protein (KIAA0917), mRNA
8554	21093	34013	1.47	2.0E-44	BE389058.1	EST_HUMAN	601286914F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3613586 5'
11657	24084		1.8	2.0E-44	BE244902.1	EST_HUMAN	TCBAP1E2795 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP2795
12608	24992		63.7	2.0E-44	11526293	NT	Homo sapiens cat eye syndrome chromosome region, candidate 1 (CECR1), mRNA
56	12736	25205	5.03	1.0E-44	7657334	NT	Homo sapiens Mischapen/NIK-related kinase (MINK), mRNA
56	12736	25206	5.03	1.0E-44	7657334	NT	Homo sapiens Mischapen/NIK-related kinase (MINK), mRNA
606	13234	25708	2.28	1.0E-44	AW853132.1	EST_HUMAN	RC1-CT0249-030300-026-h12 CT0249 Homo sapiens cDNA
1239	13837		1.03	1.0E-44	AW994803.1	EST_HUMAN	RC1-BN0039-110300-012-h01 BN0039 Homo sapiens cDNA
1618	14211		4.77	1.0E-44	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
2266	14840	27416	3.03	1.0E-44	AA434554.1	EST_HUMAN	zw53d02.r1 Scores: total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:773763 5' similar to contains THR13 THR repetitive element;
2266	14840	27417	3.03	1.0E-44	AA434554.1	EST_HUMAN	zw53d02.r1 Scores: total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:773763 5' similar to contains THR13 THR repetitive element;
2321	15463	27468	1.21	1.0E-44	AA398096.1	EST_HUMAN	z88g11.r1 Scores: testis_NHT Homo sapiens cDNA clone IMAGE:729476 5'
2788	15341	27911	1.54	1.0E-44	AF166778.1	NT	Homo sapiens transcription factor IGHM enhancer 3, JM11 protein, JM4 protein, JM5 protein, T54 protein, JM10 protein, A4 differentiation-dependent protein, triple LIM domain protein 6, and synaptophysin genes, complete cds, and L-type calcium channel a>
3788	16388		4.07	1.0E-44	AA455869.1	EST_HUMAN	aa01c09.s1 Scores: NihMPu_S1 Homo sapiens cDNA clone IMAGE:811984 3'
8209	20750	33663	1.33	1.0E-44	AW967073.1	EST_HUMAN	EST379147 MAGI resequences, MAGJ Homo sapiens cDNA
8209	20750	33664	1.33	1.0E-44	AW967073.1	EST_HUMAN	EST379147 MAGI resequences, MAGJ Homo sapiens cDNA
8560	21119	34040	0.94	1.0E-44	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
8956	21494	34417	0.68	1.0E-44	A1637183.1	EST_HUMAN	qx88g07.x1 NC1_CGAP_G08 Homo sapiens cDNA clone IMAGE:2009628 3'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10892	23413		11.29	1.0E-44	AV714608.1	EST_HUMAN	AV714608 DCB Homo sapiens cDNA clone DCBBYE03 5'
11404	23855	36921	5.07	1.0E-44	10092684	NT	Homo sapiens Sushi domain (SCR repeat) containing (BK65A8.2), mRNA
11460	23910	36976	3.83	1.0E-44	AW846987.1	EST_HUMAN	RC1-C10198-150999-011-C08 C10198 Homo sapiens cDNA
11460	23910	36977	3.83	1.0E-44	AW846987.1	EST_HUMAN	RC1-C10198-150999-011-C08 C10198 Homo sapiens cDNA
4678	17260	29711	1.31	9.0E-45	8922391	NT	Homo sapiens hypothetical protein FLJ10379 (FLJ10379), mRNA
4678	17260	29712	1.31	9.0E-45	8922391	NT	Homo sapiens hypothetical protein FLJ10379 (FLJ10379), mRNA
6757	19350	32159	1.34	9.0E-45	AB023212.1	NT	Homo sapiens mRNA for KIAA0995 protein, partial cds
2565	15129	27698	6.45	8.0E-45	5174718	NT	Homo sapiens TRK-fused gene (NOTE: non-standard symbol and name) (TFG) mRNA
5241	17805	30226	7.14	8.0E-45	5174718	NT	Homo sapiens TRK-fused gene (NOTE: non-standard symbol and name) (TFG) mRNA
8051	20593	33501	0.84	8.0E-45	AA377985.1	EST_HUMAN	EST80893 Synovial sarcoma Homo sapiens cDNA 5' end
2884	15600		0.99	7.0E-45	AL160131.1	NT	Novel human gene mapping to chromosome 22
4050	16647		6.39	6.0E-45	AW157570.1	EST_HUMAN	au83h07.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782809 3' similar to SW:R13A_HUMAN P40428 60S RIBOSOMAL PROTEIN L13A ;
12385	25063		2	6.0E-45	11418213	NT	Homo sapiens ADP-ribosylation factor GTPase activating protein 1 (ARFGAP1), mRNA
925	13538		1.34	5.0E-45	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
2045	14827	27196	12.03	5.0E-45	BF333627.1	EST_HUMAN	C1M4-CN0044-180200-515-101 CN0044 Homo sapiens cDNA
3246	15858	28341	2.25	5.0E-45	A1523766.1	EST_HUMAN	tg94f07.x1 NCI_OGAP_CLL1 Homo sapiens cDNA clone IMAGE:2118453 3' similar to SW:PAX1_MOUSE P09084 PAIRED BOX PROTEIN PAX-1 ;
5703	18329	30832	8.34	5.0E-45	AA397781.1	EST_HUMAN	z172d03.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:727877 3' similar to contains element TAR1 repetitive element ;
6170	18782	31548	1.1	5.0E-45	Y18933.1	NT	Homo sapiens MCP-1 gene and enhancer region
6170	18782	31549	1.1	5.0E-45	Y18933.1	NT	Homo sapiens MCP-1 gene and enhancer region
6215	18825	31586	1.15	5.0E-45	AB022318.1	NT	Homo sapiens mRNA for inducible nitric oxide synthase, complete cds
6215	18825	31587	1.15	5.0E-45	AB022318.1	NT	Homo sapiens mRNA for inducible nitric oxide synthase, complete cds
6336	18942	31720	1.82	5.0E-45	11496268	NT	Homo sapiens zinc finger protein 277 (ZNF277), mRNA
6336	18942	31721	1.82	5.0E-45	11496268	NT	Homo sapiens zinc finger protein 277 (ZNF277), mRNA
8218	20759	33673	0.51	5.0E-45	11418704	NT	Homo sapiens bone morphogenetic protein 5 (BMP5), mRNA
8971	21509	34431	1.79	5.0E-45	4759223	NT	Homo sapiens programmed cell death 5 (PDCD5), mRNA
11542	23990	37062	2.52	5.0E-45	8923698	NT	Homo sapiens golgin-like protein (GLP), mRNA
1183	13784	26294	11.57	4.0E-45	X95826.1	NT	H.sapiens ART4 gene
2330	14801	27472	21.18	4.0E-45	BE265622.1	EST_HUMAN	601194440F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3538425 5'
4605	17186	29635	0.68	4.0E-45	4759249	NT	Homo sapiens TRAF family member-associated NFKB activator (TANK) mRNA
8886	21424		0.86	4.0E-45	AA226220.1	EST_HUMAN	nc26e07.s1 NCI_OGAP_P11 Homo sapiens cDNA clone IMAGE:1009284 similar to contains element L1 repetitive element ;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11629	24071		2.17	4.0E-45	BE044076.1	EST_HUMAN	h36h04.x1 NCI_CGAP_U11 Homo sapiens cDNA clone IMAGE:3039511 3' similar to contains MER28 b3
11673	25006	30813	1.68	4.0E-45	11435947	NT	MER28 repetitive element;
12278	24482		2.14	4.0E-45	BF676077.1	EST_HUMAN	Homo sapiens chromosome 12 open reading frame 3 (C12ORF3), mRNA
4161	15982		1.32	3.0E-45	171480.1	EST_HUMAN	602084052F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4248263 5'
6383	18987	31767	1.29	3.0E-45	6753651	NT	y33507.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:110245 5'
6383	18987	31768	1.29	3.0E-45	6753651	NT	Mus musculus dynein, axon, heavy chain 11 (Dnahc11), mRNA
8388	20928		1.29	3.0E-45	AV723976.1	EST_HUMAN	Mus musculus dynein, axon, heavy chain 11 (Dnahc11), mRNA
8726	21265	34185	3.78	3.0E-45	4758451	NT	AV723976 HTB Homo sapiens cDNA clone HTBAAG01 5'
10209	22704	35696	11.34	3.0E-45	AL163227.2	NT	Homo sapiens golgi autoantigen, golgin subfamily a, 2 (GOLGA2) mRNA
10209	22704	35697	11.34	3.0E-45	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
2547	15111		4.13	2.0E-45	AL163218.2	NT	Homo sapiens chromosome 21 segment HS21C018
3067	15682	28154	0.99	2.0E-45	AJ243213.1	NT	Homo sapiens partial 5-HT4 receptor gene, exons 2 to 5
6644	19240	32043	5.46	2.0E-45	L01665.1	NT	Human eosinophil Charcot-Leyden crystal (CLC) protein (lysophospholipase) gene, promoter and exon 1
7605	20118	32994	1.35	2.0E-45	BE782184.1	EST_HUMAN	601487793F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3870838 5'
8354	20894	33815	0.75	2.0E-45	AW834834.1	EST_HUMAN	RC0-LT0001-150200-032-d11 LT0001 Homo sapiens cDNA
10682	24798	36225	28.86	2.0E-45	BE934350.1	EST_HUMAN	MRO-HT0923-190800-201-a02 HT0923 Homo sapiens cDNA
11055	23567	36603	5.39	2.0E-45	AA458770.1	EST_HUMAN	aa87f12.r1 Stragene fetal retina 937202 Homo sapiens cDNA clone IMAGE:638319 5' similar to
11378	23830	36882	2.33	2.0E-45	AW270280.1	EST_HUMAN	TR:G1144569 G1144569 R-SLY1;
11378	23830	36893	2.33	2.0E-45	AW270280.1	EST_HUMAN	xp72a03.x1 NCI_CGAP_Ov40 Homo sapiens cDNA clone IMAGE:2745868 3'
12548	24653		2.42	2.0E-45	11418157	NT	xp72a03.x1 NCI_CGAP_Ov40 Homo sapiens cDNA clone IMAGE:2745868 3'
129	13067		2.71	1.0E-45	BE389855.1	EST_HUMAN	Homo sapiens calcium channel, voltage-dependent, alpha 1i subunit (CACNA1i), mRNA
434	13067		3.24	1.0E-45	BE389855.1	EST_HUMAN	601284360F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3606183 5'
498	13130	25619	1.61	1.0E-45	4506412	NT	601284360F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3606183 5'
1216	13816	26331	1.54	1.0E-45	7657290	NT	Homo sapiens RAP1A, member of RAS oncogene family (RAP1A), mRNA
3137	15751	28219	10.2	1.0E-45	U32169.1	NT	Homo sapiens Langerhans cell specific c-type lectin (LANGERIN), mRNA
3539	16144	28627	0.88	1.0E-45	8659558	NT	Human pro-a2 chain of collagen type XI (COL11A2) gene, complete cds
3632	16235	28710	0.68	1.0E-45	AB046811.1	NT	Homo sapiens chromosome 21 open reading frame 1 (C21orf4), mRNA
4575	17158	28602	5.67	1.0E-45	BE398633.1	EST_HUMAN	Homo sapiens chromosome 21 open reading frame 1 (C21orf4), mRNA
5335	17896	30311	11.79	1.0E-45	7706128	NT	Homo sapiens KIAA1591 protein, partial cds
7974	20516	33422	0.71	1.0E-45	11422236	NT	601289116F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3619803 5'
7974	20516	33423	0.71	1.0E-45	11422236	NT	Homo sapiens oxysterol 7alpha-hydroxylase (CYP39A1), mRNA
							Homo sapiens peroxisomal biogenesis factor 14 (PEX14), mRNA
							Homo sapiens peroxisomal biogenesis factor 14 (PEX14), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8543	21082	34003	0.88	1.0E-45	D87875.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
9049	21586	34517	4.07	1.0E-45	BE887843.1	EST_HUMAN	601511228F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3912535 5'
9441	21967	34918	0.98	1.0E-45	AB002287.1	NT	Human mRNA for KIAA0288 gene, partial cds
11875	24225	31045	4.89	1.0E-45	11418098	NT	Homo sapiens protein kinase C, alpha binding protein (PRKCABP), mRNA
12063	24346		9.84	1.0E-45	11528291	NT	Homo sapiens hypothetical protein FLJ20454 (FLJ20454), mRNA
12068	24349		10.38	1.0E-45	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
12513	24632	30895	3.46	1.0E-45	11418157	NT	Homo sapiens calcium channel, voltage-dependent, alpha 11 subunit (CACNA11), mRNA
8170	20711	33828	1.87	9.0E-46	9910293	NT	Mus musculus keratin complex 2, gene 6g (Krl2-6g), mRNA
8569	21108		6.51	9.0E-46	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
10374	22888	35861	10.22	9.0E-46	AW246984.1	EST_HUMAN	2822449.5prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2822449 5'
2486	15051	27622	9.69	8.0E-46	A1433281.1	EST_HUMAN	tt3208.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2132199 3' similar to gb:J00314_rna2
2486	15051	27623	9.69	8.0E-46	A1433281.1	EST_HUMAN	TUBULIN BETA-1 CHAIN (HUMAN);
7998	20540		6.07	8.0E-46	BE167244.1	EST_HUMAN	tt3208.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2132199 3' similar to gb:J00314_rna2
11513	23981		2.87	8.0E-46	11419729	NT	RC5-HT0508-280200-012-C12 HT0508 Homo sapiens cDNA
2280	14854	27432	1.07	7.0E-46	U46007.1	NT	Homo sapiens ribosomal protein L44 (RPL44), mRNA
4690	17282		6.38	7.0E-46	BE386165.1	EST_HUMAN	Rattus norvegicus ecpin mRNA, complete cds
4928	17504		0.96	7.0E-46	BE064388.1	EST_HUMAN	601277292F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3618119 5'
6193	18803	31572	3.72	7.0E-46	8922708	NT	RC4-BT0310-110300-015-f10 BT0310 Homo sapiens cDNA
6620	19217	32022	1.29	7.0E-46	BF105945.1	EST_HUMAN	Homo sapiens hypothetical protein FLJ10847 (FLJ10847), mRNA
12203	24428		1.6	7.0E-46	AL163246.2	NT	601822835F1 NIH_MGC_77 Homo sapiens cDNA clone IMAGE:4042738 5'
2793	15336	27906	3.13	6.0E-46	A1884381.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C046
2793	15336	27907	3.13	6.0E-46	A1884381.1	EST_HUMAN	wm31f08.x1 NCI_CGAP_U14 Homo sapiens cDNA clone IMAGE:2437575 3' similar to contains MER19.12
6278	18886	31655	9.32	6.0E-46	A1835448.1	EST_HUMAN	MER19 repetitive element;
7269	19797	32653	0.83	6.0E-46	AW1513244.1	EST_HUMAN	wm31f08.x1 NCI_CGAP_U14 Homo sapiens cDNA clone IMAGE:2437575 3' similar to contains MER19.12
11268	23006		2.81	6.0E-46	BE784971.1	EST_HUMAN	MER19 repetitive element;
218	12879		5.85	5.0E-46	AL163210.2	NT	ts58h10.x1 NCI_CGAP_Kid8 Homo sapiens cDNA clone IMAGE:2232835 3' similar to TR:O60363 O60363
3581	16185	28687	1.37	5.0E-46	BE677194.1	EST_HUMAN	SA GENE. ;
3581	16185	28688	1.37	5.0E-46	BE677194.1	EST_HUMAN	xc42e04.x1 NCI_CGAP_U11 Homo sapiens cDNA clone IMAGE:2706654 3' similar to gb:L08088 DNAJ
							PROTEIN HOMOLOG 2 (HUMAN);
							601478409F1 NIH_MGC_88 Homo sapiens cDNA clone IMAGE:3980955 5'
							Homo sapiens chromosome 21 segment HS21C010
							7d81g01.x1 Lupski_dorsal_root_ganglion Homo sapiens cDNA clone IMAGE:3279408 3'
							7d81g01.x1 Lupski_dorsal_root_ganglion Homo sapiens cDNA clone IMAGE:3279408 3'

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6833	19423	32239	1.83	5.0E-46	BF590442.1	EST_HUMAN	naa3807.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3258757 3' similar to TR:O75202 O75202 HOMOLOG OF RAT KIDNEY-SPECIFIC
7021	19555	32380	3.81	5.0E-46	BF347229.1	EST_HUMAN	602021184F1 NCL_CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4156670 5'
7152	19884	32526	0.74	5.0E-46	AW582253.1	EST_HUMAN	QV4-ST0212-120100-075-09 ST0212 Homo sapiens cDNA
9533	22033	34992	0.46	5.0E-46	AA398381.1	EST_HUMAN	z62c08.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:726926 3'
669	13293		1.73	4.0E-46	AA601143.1	EST_HUMAN	nc54e09.s1 NCL_CGAP_SS1 Homo sapiens cDNA clone IMAGE:1104520 3' similar to gb:X53741_ma1 FIBULIN-1, ISOFORM A PRECURSOR (HUMAN);
1741	14331	26875	3.96	4.0E-46	AW770544.1	EST_HUMAN	hi86c03.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3008836 3' similar to gb:X14008_ma1 LYSOZYME C PRECURSOR (HUMAN); contains element MER37 repetitive element;
1741	14331	26876	3.96	4.0E-46	AW770544.1	EST_HUMAN	hi86c03.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3008836 3' similar to gb:X14008_ma1 LYSOZYME C PRECURSOR (HUMAN); contains element MER37 repetitive element;
2767	15321	27687	3.11	4.0E-46	M18048.1	NT	Human endogenous retrovirus RTVL-H2
5628	18257	30727	2.09	4.0E-46	M36852.1	NT	Human Ig germline gamma-3 heavy-chain gene V region, partial cds
5628	18257	30728	2.09	4.0E-46	M36852.1	NT	Human Ig germline gamma-3 heavy-chain gene V region, partial cds
12332	24516	30921	1.86	4.0E-46	AB002059.1	NT	Homo sapiens DNA for Human P2XM, complete cds
4482	17067	29517	0.81	3.0E-46	4506376	NT	Homo sapiens mitogen-activated protein kinase kinase kinase 3 (MAP4K3), mRNA
4889	17464	29918	0.98	3.0E-46	Z73660.1	NT	H. sapiens Ig lambda light chain variable region gene (7c.11.2) germline; Ig-Light-Lambda; VLambda
4889	17464	29919	0.98	3.0E-46	Z73660.1	NT	H. sapiens Ig lambda light chain variable region gene (7c.11.2) germline; Ig-Light-Lambda; VLambda
8684	21223	34143	7.65	3.0E-46	A1831462.1	EST_HUMAN	wj49c04.x1 NCL_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2406150 3' similar to contains THR.b2 THR repetitive element;
8935	21473	34392	0.56	3.0E-46	L08850.1	NT	Human AD amyloid mRNA, complete cds
8935	21473	34393	0.56	3.0E-46	L08850.1	NT	Human AD amyloid mRNA, complete cds
11446	23896	36961	3.14	3.0E-46	D31765.1	NT	Human mRNA for KIAA0081 gene, partial cds
870	13485	26000	8.24	2.0E-46	AA468646.1	EST_HUMAN	ne08a09.s1 NCL_CGAP_Co3 Homo sapiens cDNA clone IMAGE:880408 3' similar to contains THR.b2 THR repetitive element;
1608	14201		1.41	2.0E-46	AA678246.1	EST_HUMAN	z27a11.s1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:431896 3'
1683	14275	26808	2.17	2.0E-46	U78027.1	NT	Homo sapiens Bruton's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3) genes, complete cds
5110	17682	30119	1.2	2.0E-46	AA399286.1	EST_HUMAN	z59e02.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:726650 5' similar to SW:RSP1_MOUSE Q01730 RSP-1 PROTEIN;



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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7497	20020	32884	6.85	2.0E-46	9910569	NT	Mus musculus sperm tail associated protein (Stap), mRNA
8014	20556		1.81	2.0E-46	BE869151.1	EST_HUMAN	601445137F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3849297 5'
11125	23633		1.56	2.0E-46	7657233	NT	Homo sapiens small acidic protein (IMAGE145052), mRNA
11802	24963		1.74	2.0E-46	BF028854.1	EST_HUMAN	601785225F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3987328 5'
12094	24361		1.43	2.0E-46	AA001788.1	EST_HUMAN	z84f12.1 Soares_fetal_liver_spleen_INF15_S1 Homo sapiens cDNA clone IMAGE:428015 5'
12408	24846	30800	5.28	2.0E-46	AW277214.1	EST_HUMAN	xq78h03.x1 NCI_CGAP_Lu34 Homo sapiens cDNA clone IMAGE:2758789 3'
1276	13871	26391	5.79	1.0E-46	4502884	NT	Homo sapiens cell division cycle 10 (homologous to CDC10 of S. cerevisiae) (CDC10) mRNA
2320	14892	27467	4.58	1.0E-46	AW978516.1	EST_HUMAN	EST390826 IMAGE resequences, MAGP Homo sapiens cDNA
2443	19010	27582	2.81	1.0E-46	H97330.1	EST_HUMAN	EST486095 WATMT1 Homo sapiens cDNA clone 486095
3286	15897	28375	22.33	1.0E-46	AA631912.1	EST_HUMAN	np78b02.s1 NCI_CGAP_P12 Homo sapiens cDNA clone IMAGE:1132395 similar to gb:X78717 H. sapiens MT-11 mRNA. (HUMAN);
4989	17572		3.21	1.0E-46	AB023197.1	NT	Homo sapiens mRNA for KIAA0880 protein, partial cds
5878	18500	31226	11.77	1.0E-46	BF184707.1	EST_HUMAN	7c92b01.x1 NCI_CGAP_Ov18 Homo sapiens cDNA clone IMAGE:3643705 3'
6131	24757	31500	4.79	1.0E-46	8923762	NT	Homo sapiens centaurin-alpha 2 protein (HSA272195), mRNA
6131	24757	31501	4.79	1.0E-46	8923762	NT	Homo sapiens centaurin-alpha 2 protein (HSA272195), mRNA
6725	19319	32124	0.72	1.0E-46	BF196247.1	EST_HUMAN	7n48e07.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3587852 3' similar to contains element MER22 repetitive element ;
10742	18500	31226	4.43	1.0E-46	BF194707.1	EST_HUMAN	7c92b01.x1 NCI_CGAP_Ov18 Homo sapiens cDNA clone IMAGE:3643705 3'
11831	24198	31035	1.97	1.0E-46	BF531102.1	EST_HUMAN	602072284F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4215398 5'
11831	24198	31036	1.97	1.0E-46	BF531102.1	EST_HUMAN	602072264F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4215398 5'
12626	24704		1.39	1.0E-46	AV715377.1	EST_HUMAN	AV715377 DCB Homo sapiens cDNA clone DCBAIE03 5'
798	13415		3.52	9.0E-47	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
5065	17638	30081	2.39	9.0E-47	AW770928.1	EST_HUMAN	h183e04.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3009534 3' similar to TR:O75703 O75703 HYPOTHETICAL 12.4 KD PROTEIN. ;
6514	18114	31903	0.78	9.0E-47	11425439	NT	Homo sapiens zinc finger protein ZNF286 (ZNF286), mRNA
12355	24951	30627	3.64	9.0E-47	11417968	NT	Homo sapiens SEC14 (S. cerevisiae)-like 2 (SEC14L2), mRNA
1844	14432	26985	16.42	8.0E-47	Y18536.1	NT	Homo sapiens HLA-C gene, exon 5, individual 19323
1844	14432	26986	16.42	8.0E-47	Y18536.1	NT	Homo sapiens HLA-C gene, exon 5, individual 19323
2742	15287	27864	1.1	8.0E-47	5453955	NT	Homo sapiens protein phosphatase 2, regulatory subunit B (B56), epsilon isoform (PPP2R5E) mRNA
3058	15674	28150	2.05	8.0E-47	AJ228043.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 3/3
3686	18287	28758	0.8	8.0E-47	AB041928.1	NT	Homo sapiens mRNA for GSK family kinase MINK-2, complete cds
3686	18287	28757	0.8	8.0E-47	AB041928.1	NT	Homo sapiens mRNA for GSK family kinase MINK-2, complete cds
12438	24845		1.55	7.0E-47	AV683284.1	EST_HUMAN	AV683284 GKC Homo sapiens cDNA clone GKCASH11 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9200	21717	34661	6.33	6.0E-47	AI695189.1	EST_HUMAN	tz98h02.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2286559 3'
9628	22128	35091	0.69	6.0E-47	AB042824.1	NT	Homo sapiens RECQL5 beta mRNA for DNA helicase recQ5 beta, complete cds
9628	22128	35092	0.69	6.0E-47	AB042824.1	NT	Homo sapiens RECQL5 beta mRNA for DNA helicase recQ5 beta, complete cds
6691	19287	32090	5.97	5.0E-47	11423972	NT	Homo sapiens CDC37 (cell division cycle 37, S. cerevisiae, homolog) (CDC37), mRNA
10674	23206		4.92	5.0E-47	M78590.1	EST_HUMAN	EST00738 Fetal brain, Strabagene (cat#936206) Homo sapiens cDNA clone HFBCF07
1445	14037	26567	3.92	4.0E-47	4557556	NT	Homo sapiens E1A binding protein p300 (EP300) mRNA
6920	19579	32408	0.94	4.0E-47	BE938896.1	EST_HUMAN	MR4-TN0108-280800-207-404 TN0108 Homo sapiens cDNA
8417	20957	33874	2.47	4.0E-47	BE616483.1	EST_HUMAN	601280486F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3622437 5'
8417	20957	33875	2.47	4.0E-47	BE616483.1	EST_HUMAN	601280486F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3622437 5'
8553	21092	34012	0.57	4.0E-47	AW993777.1	EST_HUMAN	RC3-BN0034-220300-015-05 BN0034 Homo sapiens cDNA
11494	23943		6.19	4.0E-47	AW515509.1	EST_HUMAN	xx68b07.x1 NCI_CGAP_Lym12 Homo sapiens cDNA clone IMAGE:2848597 3' similar to SW:INT6_MOUSE
570	13201	25682	3.11	3.0E-47	BE907634.1	EST_HUMAN	Q64252 VIRAL INTEGRATION SITE PROTEIN INT-6, [1].
570	13201	25683	3.11	3.0E-47	BE907634.1	EST_HUMAN	601497639F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3899721 5'
851	13467	25976	5.09	3.0E-47	N57483.1	EST_HUMAN	601497639F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3899721 5'
981	13593	26108	9.88	3.0E-47	AL163284.2	NT	yy54b04.s1 Soares, multiple, sclerotic, 2NbhMSP Homo sapiens cDNA clone IMAGE:277327 3'
3343	15953	28429	0.77	3.0E-47	4504116	NT	Homo sapiens chromosome 21 segment HS21C084
4038	16636		5.04	3.0E-47	U93181.1	NT	Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1) mRNA
6163	18776	31538	4.81	3.0E-47	AW408800.1	EST_HUMAN	Homo sapiens nuclear dual-specificity phosphatase (SBE1) mRNA, partial cds
6163	18776	31539	4.81	3.0E-47	AW408800.1	EST_HUMAN	UI-HF-BM0-adv-d-07-Q-Ulr1 NIH_MGC_38 Homo sapiens cDNA clone IMAGE:3063205 5'
6680	19276		1.71	3.0E-47	AI222413.1	EST_HUMAN	UI-HF-BM0-adv-d-07-Q-Ulr1 NIH_MGC_38 Homo sapiens cDNA clone IMAGE:3063205 5'
7416	19941	32806	0.75	3.0E-47	AI819755.1	EST_HUMAN	qh04e07.x1 Soares, NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1843716 3'
7416	19941	32807	0.75	3.0E-47	AI819755.1	EST_HUMAN	wj11h08.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2402559 3'
8767	21306	34228	0.56	3.0E-47	AW963796.1	EST_HUMAN	wj11h08.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2402559 3'
8767	21306	34229	0.56	3.0E-47	AW963796.1	EST_HUMAN	EST375869 MAGe resequences, MAGH Homo sapiens cDNA
159	12822	25310	1.38	2.0E-47	4505318	NT	EST375869 MAGe resequences, MAGH Homo sapiens cDNA
1003	13614	26127	2.14	2.0E-47	AL163209.2	NT	Homo sapiens myosin phosphatase, target subunit 2 (MYPT2), mRNA
1003	13614	26128	2.14	2.0E-47	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
1613	14206		1.1	2.0E-47	AI969279.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C009
1637	14239	26762	1.07	2.0E-47	7662109	NT	Homo sapiens chromosome 21 segment HS21C009
1717	14309	26948	3.75	2.0E-47	AA524514.1	EST_HUMAN	wq96b02.x1 NCI_CGAP_G06 Homo sapiens cDNA clone IMAGE:2479851 3'
4439	17025	29465	1.88	2.0E-47	4504868	NT	Homo sapiens KIAA0426 gene product (KIAA0426), mRNA
4473	17059	29506	1.91	2.0E-47	AA569592.1	EST_HUMAN	ng43h12.s1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:337607 3'
4473	17059	29507	1.91	2.0E-47	AA569592.1	EST_HUMAN	Homo sapiens ring finger protein (C3HC4 type) 8 (RNF8), mRNA
4473	17059	29507	1.91	2.0E-47	AA569592.1	EST_HUMAN	nf23g07.s1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:914652
4473	17059	29507	1.91	2.0E-47	AA569592.1	EST_HUMAN	nf23g07.s1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:914652

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4804	17187	29634	2.94	2.0E-47	5174848	NT	Homo sapiens Rev/Rex activation domain binding protein-related (RAB-R) mRNA
4835	17510	28957	1.28	2.0E-47	AW965166.1	EST_HUMAN	EST377239 MAGC resequences, MAGI Homo sapiens cDNA
5958	18578	31312	0.93	2.0E-47	AF073921.1	NT	Homo sapiens regulator of G-protein signalling 6 variant form (RGS6) mRNA, complete cds
6130	18745	31498	1.46	2.0E-47	BE778475.1	EST_HUMAN	601463932F1 NIH_MGC_87 Homo sapiens cDNA clone IMAGE:3867487 5'
6130	18745	31489	1.46	2.0E-47	BE778475.1	EST_HUMAN	601463932F1 NIH_MGC_87 Homo sapiens cDNA clone IMAGE:3867487 5'
7688	24788		1.25	2.0E-47	L09731.1	NT	Homo sapiens 5-hydroxytryptamine 1D receptor pseudogene with an Alu repeat insertion
7905	20447	33353	1.74	2.0E-47	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
7905	20447	33354	1.74	2.0E-47	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
8652	21191	34109	1.77	2.0E-47	AF071771.1	NT	Homo sapiens SPH-binding factor mRNA, partial cds
9410	21919	34867	1.33	2.0E-47	11526138	NT	Homo sapiens BTG family, member 3 (BTG3), mRNA
11663	24994	30608	2.82	2.0E-47	R42423.1	EST_HUMAN	y92608.s1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:28966 3' similar to contains OFR repetitive element.
1451	14043	26571	6.05	1.0E-47	A1333429.1	EST_HUMAN	gp99h03.x1 Soares fetal lung NBHL19W Homo sapiens cDNA clone IMAGE:1931189 3'
3894	16493	28953	0.93	1.0E-47	BE280477.1	EST_HUMAN	601155321F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3138893 5'
3894	16493	28954	0.93	1.0E-47	BE280477.1	EST_HUMAN	601155321F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3138893 5'
5235	17789	30218	2.44	1.0E-47	AW813908.1	EST_HUMAN	RC3-ST0197-130400-017-h02 ST0197 Homo sapiens cDNA
7109	19449	32265	5.59	1.0E-47	A1880888.1	EST_HUMAN	at19e06.x1 Barslead aorta HPLRB6 Homo sapiens cDNA clone IMAGE:2355588 3' similar to gb:M22895
8802	21341		7.68	1.0E-47	AW684648.1	EST_HUMAN	RAS-RELATED PROTEIN RAP-1A (HUMAN);
10258	22753	35741	2.06	1.0E-47	L30115.1	NT	hi84a11.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2878972 3' similar to gb:M26328 KERATIN, TYPE I CYTOSKELETAL 18 (HUMAN);
1654	14248	28779	2.38	9.0E-48	AF223391.1	NT	Papio hamadryas alcohol dehydrogenase class I (ADH) gene, 5' region
3612	18215	28885	0.78	9.0E-48	BF359947.1	EST_HUMAN	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
5960	18482	31205	0.83	9.0E-48	BE888196.1	EST_HUMAN	CM2-MT0100-310700-290-105 MT0100 Homo sapiens cDNA
5960	18482	31206	0.83	9.0E-48	BE888196.1	EST_HUMAN	601511714F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913108 5'
6373	18977	31755	0.69	9.0E-48	AU123240.1	EST_HUMAN	601511714F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913108 5'
10985	23509	36542	3.37	9.0E-48	BE363813.1	EST_HUMAN	AU123240 NT2RM1 Homo sapiens cDNA clone NT2RM1000978 5'
1293	13888		2.34	8.0E-48	4501900	NT	601310479F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3632083 5'
1294	13888		1.76	8.0E-48	4501900	NT	Homo sapiens aminocyclase 1 (ACY1), mRNA
3169	15783	28254	3.3	8.0E-48	AW768477.1	EST_HUMAN	Homo sapiens aminocyclase 1 (ACY1), mRNA
3169	15783	28255	3.3	8.0E-48	AW768477.1	EST_HUMAN	hi81b03.x1 NCL CGAP_Lym12 Homo sapiens cDNA clone IMAGE:3001133 3' similar to gb:X64707 BREAST BASIC CONSERVED PROTEIN 1 (HUMAN);
3169	15783	28255	3.3	8.0E-48	AW768477.1	EST_HUMAN	hi81b03.x1 NCL CGAP_Lym12 Homo sapiens cDNA clone IMAGE:3001133 3' similar to gb:X64707 BREAST BASIC CONSERVED PROTEIN 1 (HUMAN);

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4005	16603	29077	0.6	8.0E-48	4504116	NT	Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1) mRNA
516	13149		2.03	7.0E-48	AB033035.1	NT	Homo sapiens mRNA for KIAA1209 protein, partial cds
517	13149		20.88	7.0E-48	AB033035.1	NT	Homo sapiens mRNA for KIAA1209 protein, partial cds
1544	14136	26670	1.08	7.0E-48	6912719	NT	Homo sapiens bousled-like kinase 1 (TLK1), mRNA
1879	14271	26804	3.49	7.0E-48	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
6672	19268	32072	21.95	7.0E-48	11416831	NT	Homo sapiens histidyl-tRNA synthetase (HARS), mRNA
3658	16261	28733	1.19	6.0E-48	AI761111.1	EST_HUMAN	wf69h03.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2398613 3'
6208	18818	31589	0.98	6.0E-48	AB006955.1	NT	Homo sapiens mRNA for AIE-75, complete cds
6881	19615	32450	0.87	6.0E-48	11420995	NT	Homo sapiens BMX non-receptor tyrosine kinase (BMX), mRNA
9051	21588	34520	2.17	6.0E-48	AF028816.1	NT	Homo sapiens putative oncogene protein mRNA, partial cds
9460	21986	34940	1.72	6.0E-48	11427428	NT	Homo sapiens hypothetical protein FLJ11008 (FLJ11008), mRNA
9606	22106	35069	3.5	6.0E-48	AA189080.1	EST_HUMAN	zq45b06.s1 Stratagene hNT neuron (#937233) Homo sapiens cDNA clone IMAGE:932627 3' similar to contains Alu repetitive element;
2293	14867	27442	1.43	5.0E-48	4827059	NT	Homo sapiens xylulokinase (H. influenzae) homolog (XYLB) mRNA
2300	14873	27449	1.15	5.0E-48	4827059	NT	Homo sapiens xylulokinase (H. influenzae) homolog (XYLB) mRNA
3350	18002	28435	1.64	5.0E-48	4826891	NT	Homo sapiens phosphodiesterase 1A, calmodulin-dependent (PDE1A) mRNA
5418	17975	30383	1.13	5.0E-48	AF219936.1	NT	Homo sapiens diacylglycerol kinase iota (DGKI) gene, exon 32
8511	21050	33972	6.84	5.0E-48	BE064410.1	EST_HUMAN	RC4-BT0311-141199-011-h06 BT0311 Homo sapiens cDNA
10836	23357	36373	4.24	4.0E-48	AI620420.1	EST_HUMAN	tu47a02.x1 NCI_CGAP_P128 Homo sapiens cDNA clone IMAGE:2254154 3'
1428	14021	26549	1.75	3.0E-48	AV690964.1	EST_HUMAN	AV690964 GKC Homo sapiens cDNA clone GKCDRE12 5'
2019	14601	27165	9.63	3.0E-48	4885170	NT	Homo sapiens chromosome X open reading frame 6 (CXORF6) mRNA
2019	14601	27166	9.63	3.0E-48	4885170	NT	Homo sapiens chromosome X open reading frame 6 (CXORF6) mRNA
3465	16072	28545	0.98	3.0E-48	AF172453.1	NT	Homo sapiens opicid growth factor receptor mRNA, complete cds
3693	16294	28764	0.76	3.0E-48	AW664531.1	EST_HUMAN	hi14b12.x1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2872255 3' similar to SW:DCRB_HUMAN
4332	16919		0.67	3.0E-48	AA009541.1	EST_HUMAN	P56555 DOWN SYNDROME CRITICAL REGION PROTEIN B. ;
6053	18671	31410	2.98	3.0E-48	BE084571.1	EST_HUMAN	z04g03.r1 Soares fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:428844 5'
7087	19658	32497	1.01	3.0E-48	AF087913.1	NT	MR4-BT0657-080400-201-a10 BT0657 Homo sapiens cDNA
							Human endogenous retrovirus HERV-P-T47D
8330	20871		3.02	3.0E-48	AA659930.1	EST_HUMAN	nv0305.s1 NCI_CGAP_P122 Homo sapiens cDNA clone IMAGE:1219137 3' similar to contains PTR5.b1
10753	23277	36290	6.32	3.0E-48	BF514170.1	EST_HUMAN	PTR5 repetitive element ;
5	12685	25142	2.18	2.0E-48	AA465007.1	EST_HUMAN	UI-HBW1-anti-a-10-O-JUI.s1 NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3082267 3'
49	12729	25193	2.12	2.0E-48	AA631940.1	EST_HUMAN	zx80c03.r1 Soares ovary tumor NBHOT Homo sapiens cDNA clone IMAGE:870052 5'
							fmr1c7 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR17-26

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4629	17212	29663	0.93	2.0E-48	BE246095.1	EST_HUMAN	TCBAP-ID3842 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP3842
5095	17668	30107	1.8	2.0E-48	T03176.1	EST_HUMAN	FB2E2 Fetal brain, Stratagene Homo sapiens cDNA clone FB2E2 3' end
5095	17668	30108	1.8	2.0E-48	T03176.1	EST_HUMAN	FB2E2 Fetal brain, Stratagene Homo sapiens cDNA clone FB2E2 3' end
7528	20048	32919	4.15	2.0E-48	AB040934.1	NT	Homo sapiens mRNA for KIAA1501 protein, partial cds
7528	20048	32920	4.15	2.0E-48	AB040934.1	NT	Homo sapiens mRNA for KIAA1501 protein, partial cds
7539	20059	32933	3.51	2.0E-48	11498238	NT	Homo sapiens v-rel avian reticuloendotheliosis viral oncogene homolog A (nuclear factor of kappa light polypeptide gene enhancer in B-cells 3 (p65)) (RELA), mRNA
8266	20837	33758	1.53	2.0E-48	AV743451.1	EST_HUMAN	AV743451 CB Homo sapiens cDNA clone CBCCGG10 5'
11828	12685	25142	4.4	2.0E-48	AA465007.1	EST_HUMAN	zx80c03.r1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:810052 5'
60	12739	25210	3.22	1.0E-48	7706534	NT	Homo sapiens cisplatin resistance-associated overexpressed protein (LOC51747), mRNA
906	13520	26038	5.3	1.0E-48	4502168	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
1114	13718	26228	2.58	1.0E-48	7657430	NT	Homo sapiens EBNA-2 co-activator (100kD) (p100), mRNA
1114	13718	26229	2.58	1.0E-48	7657430	NT	Homo sapiens EBNA-2 co-activator (100kD) (p100), mRNA
1339	13934	26455	4.33	1.0E-48	5032032	NT	Homo sapiens RNA binding motif protein 6 (RBM6) mRNA
1962	14546	27103	19.18	1.0E-48	AL163302.2	NT	Homo sapiens chromosome 21 segment HS21C102
3535	16140	28622	0.81	1.0E-48	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C046
5312	17874	30286	1.37	1.0E-48	M10976.1	NT	Human endogenous retroviral DNA (4-1), complete retroviral segment
6431	19034	31818	1.14	1.0E-48	A1889077.1	EST_HUMAN	Id17c01.x1 NCI_CGAP_Co16 Homo sapiens cDNA clone IMAGE:2075904 3' similar to TR:O14588 O14588 SIMILARITY TO U73941 ;
6431	19034	31819	1.14	1.0E-48	A1889077.1	EST_HUMAN	Id17c01.x1 NCI_CGAP_Co16 Homo sapiens cDNA clone IMAGE:2075904 3' similar to TR:O14588 O14588 SIMILARITY TO U73941 ;
6625	19222		0.94	1.0E-48	Y18000.1	NT	Homo sapiens NF2 gene
7303	19831	32890	2.58	1.0E-48	4755137	NT	Homo sapiens huntingtin (Huntington disease) (HD) mRNA
8765	21304	34225	0.52	1.0E-48	4758695	NT	Homo sapiens mitogen-activated protein kinase kinase 13 (MAP3K13), mRNA
8765	21304	34226	0.52	1.0E-48	4758695	NT	Homo sapiens mitogen-activated protein kinase kinase 13 (MAP3K13), mRNA
9140	21675	34618	0.84	1.0E-48	4502838	NT	Homo sapiens Chediak-Higashi syndrome 1 (CHS1) mRNA
9192	21709	34653	6	1.0E-48	AB033071.1	NT	Homo sapiens mRNA for KIAA1245 protein, partial cds
9485	21942	34889	0.73	1.0E-48	BE168410.1	EST_HUMAN	QV3-HT0513-060400-147-d01 HT0513 Homo sapiens cDNA
9502	22002	34959	3.86	1.0E-48	BF304683.1	EST_HUMAN	60188098F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4122118 5'
10272	22767	35754	3.54	1.0E-48	11428908	NT	Homo sapiens B cell linker protein (SLP65), mRNA
10272	22767	35755	3.54	1.0E-48	11428908	NT	Homo sapiens B cell linker protein (SLP65), mRNA
11789	24837		1.62	1.0E-48	W26785.1	EST_HUMAN	15d6 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2052	14633	27204	0.96	8.0E-49	AB026497.1	NT	Mus musculus MyoPDZ mRNA for myosin containing PDZ domain, complete cds
6204	18614	31584	3.44	8.0E-49	10048417	NT	Mus musculus T-box 20 (Tbx20), mRNA
8204	18614	31585	3.44	8.0E-49	10048417	NT	Mus musculus T-box 20 (Tbx20), mRNA
8236	20777	33698	3.22	8.0E-49	U23850.1	NT	Human inositol 1,4,5 trisphosphate receptor type 1 mRNA, partial cds
9900	22397	35372	1.23	8.0E-49	AB008681.1	NT	Homo sapiens gene for activin receptor type IIB, complete cds
10736	23261	36276	1.6	8.0E-49	AI623722.1	EST_HUMAN	ts38d12.x1 NCLCGAP_U14 Homo sapiens cDNA clone IMAGE:2230871 3' similar to contains Alu repetitive element; contains element PTR5 repetitive element.
145	13052	25542	2.62	7.0E-49	5729990	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4) mRNA
145	13052	25543	2.62	7.0E-49	5729990	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4) mRNA
417	13052	25542	2.38	7.0E-49	5729990	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4) mRNA
417	13052	25543	2.38	7.0E-49	5729990	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4) mRNA
418	13052	25542	2.59	7.0E-49	5729990	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4) mRNA
418	13052	25543	2.59	7.0E-49	5729990	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4) mRNA
1263	13860	26377	3.49	7.0E-49	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
5651	18278	30755	1.97	7.0E-49	AI807191.1	EST_HUMAN	wf25h04.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2356663 3' similar to TR:O54923
5661	18288	30766	1.11	7.0E-49	AL120937.1	EST_HUMAN	O54923 RSEC15. ;
5973	18278	30755	1.14	7.0E-49	AI807191.1	EST_HUMAN	DKFZp762C033_s1 762 (synonym: hmel2) Homo sapiens cDNA clone DKFZp762C033 3'
211	12872	25358	57.13	6.0E-49	AW731740.1	EST_HUMAN	O54923 RSEC15. ;
4193	16782	29231	0.59	6.0E-49	AL162091.1	EST_HUMAN	ba55g05.x1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:2900504 3' similar to gb:X17206 40S RIBOSOMAL PROTEIN S4 (HUMAN); gb:M20632 Mouse LLRep3 protein mRNA from a repetitive element, complete (MOUSE);
6571	19169	31966	0.69	6.0E-49	AU140742.1	EST_HUMAN	DKFZp761A138_s1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761A138 3'
11159	23666	36711	3.66	6.0E-49	AW452218.1	EST_HUMAN	AU140742 PLACE4 Homo sapiens cDNA clone PLACE4000148 5'
11514	23962	37031	3.9	6.0E-49	AA366556.1	EST_HUMAN	U1H-B13-alc-a-05-0-U1.s1 NCI CGAP Sub5 Homo sapiens cDNA clone IMAGE:3068048 3'
11514	23962	37032	3.9	6.0E-49	AA366556.1	EST_HUMAN	EST177525 Pancreas tumor III Homo sapiens cDNA 5' end
12166	24825	25854	7.5	6.0E-49	AA707567.1	EST_HUMAN	EST177525 Pancreas tumor III Homo sapiens cDNA 5' end
741	13361	25854	6.61	5.0E-49	AL163210.2	NT	q29c08.s1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:451694 3'
741	13361	25855	6.61	5.0E-49	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
1830	14419	26968	3.16	5.0E-49	AA172121.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C010
2778	15331	27900	4.95	5.0E-49	U17714.1	NT	zp29c07.r1 Stratagene neuroepithelium (#837231) Homo sapiens cDNA clone IMAGE:610860 5' similar to TR:G233226 G233226 RTVL-H PROTEIN, contains LTR7.13 LTR7 LTR7 repetitive element.
							Homo sapiens putative tumor suppressor ST13 (ST13) mRNA, complete cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3311	15922	28398	6.09	5.0E-49	11436355	NT	Homo sapiens similar to ribosomal protein S27 (metalloproteininulin 1) (H. sapiens) (LOC633362), mRNA
551	13182	25659	28.48	4.0E-49	AW189533.1	EST_HUMAN	x08b01.x1 NCI_CGAP_U14 Homo sapiens cDNA clone IMAGE:2675593 3' similar to WP:B0350.2B
7316	19843	32704	0.79	4.0E-49	11525737	NT	CE08703; Homo sapiens UDP-N-acetyl-alpha-D-galactosamine polypeptide N-acetylglucosaminyltransferase 8 (GalNAc-T8) (GALNT8), mRNA
7316	19843	32705	0.79	4.0E-49	11525737	NT	Homo sapiens UDP-N-acetyl-alpha-D-galactosamine polypeptide N-acetylglucosaminyltransferase 8 (GalNAc-T8) (GALNT8), mRNA
8798	21337	34283	0.46	4.0E-49	11425374	NT	Homo sapiens copine III (CPNE3), mRNA
8798	21337	34284	0.46	4.0E-49	11425374	NT	Homo sapiens copine III (CPNE3), mRNA
12021	25055		4.9	4.0E-49	AA210788.1	EST_HUMAN	z80705.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:882877 5'
12110	24371		3.14	4.0E-49	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
586	13216	25693	1.08	3.0E-49	X68968.1	NT	H. sapiens mRNA for acetyl-CoA carboxylase
2674	15232		1.43	3.0E-49	AA016131.1	EST_HUMAN	z831c05.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:360584 5' similar to contains L1 L3 L1 repetitive element;
5120	17692	30130	2.33	3.0E-49	U46998.1	NT	Human type IV collagen (COL4A6) gene, exon 40
7448	19972	32839	9.89	3.0E-49	H39479.1	EST_HUMAN	EST25e12 WATM1 Homo sapiens cDNA clone 25e12
11181	23687	36734	1.98	3.0E-49	AA337561.1	EST_HUMAN	EST42572 Endometrial tumor Homo sapiens cDNA 5' end
689	13313		1.57	2.0E-49	BE165980.1	EST_HUMAN	MR3-HT0487-150200-113-g01 HT0487 Homo sapiens cDNA
3259	15871	28351	1.3	2.0E-49	N28446.1	EST_HUMAN	yx23d06.r1 Soares melanocyte 2NBHM Homo sapiens cDNA clone IMAGE:262571 5'
3627	16230	28706	0.67	2.0E-49	AF026564.1	NT	Homo sapiens RNA binding protein II (RBMII) gene, complete cds
							oz88d02.x1 Soares, senescent, fibroblasts, NBHSF Homo sapiens cDNA clone IMAGE:1682403 3' similar to gb:M31470 RAS-LIKE PROTEIN TC10 (HUMAN); contains Alu repetitive element; contains element MER22 repetitive element;
4918	17493	29945	0.67	2.0E-49	A187357.1	EST_HUMAN	UI-H-B14-aps-4-02-0-UI.s1 NCI_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3088538 3'
4932	17507	29954	0.61	2.0E-49	BF611846.1	EST_HUMAN	AV717838 DCB Homo sapiens cDNA clone DCB8ALB01 5'
6834	19424	32240	1.13	2.0E-49	AV717838.1	EST_HUMAN	EST02558 Fetal brain, Striatum (cat#936206) Homo sapiens cDNA clone HFB CY50
8043	20585		1.71	2.0E-49	M86033.1	EST_HUMAN	Homo sapiens SNCA isoform (SNCA) gene, complete cds, alternatively spliced
12121	24929		1.81	2.0E-49	AF163864.1	NT	601458531F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862086 5'
932	13545		9.12	1.0E-49	BF035327.1	EST_HUMAN	Homo sapiens keratin 18 (KRT18) mRNA
1600	14192	26723	14.26	1.0E-49	4557887	NT	601115769F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3356273 5'
1837	14425	26976	4.07	1.0E-49	BE255216.1	EST_HUMAN	601820053F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:4052052 5'
5562	18183	30640	8.31	1.0E-49	BF131007.1	EST_HUMAN	

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6228	18837	31610	0.95	1.0E-49	H18291.1	EST_HUMAN	YK4804.r1 Soares adult brain N2b5H855Y Homo sapiens cDNA clone IMAGE:171703 5' similar to SP:GBG1_HUMAN Q08447 GUANINE NUCLEOTIDE-BINDING PROTEIN G(T) GAMMA-1 SUBUNIT ;
6234	18843	31615	0.94	1.0E-49	AW964640.1	EST_HUMAN	EST376713 MAGE resequences, MAGH Homo sapiens cDNA
7275	19803	32661	3.31	1.0E-49	BE398110.1	EST_HUMAN	601290330F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3620863 5'
7275	19803	32662	3.31	1.0E-49	BE398110.1	EST_HUMAN	601290330F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3620863 5'
7342	19869	32733	2.3	1.0E-49	N25884.1	EST_HUMAN	yw78g12.s1 Soares placenta_8tc9weeks_2NbHP8tc9W Homo sapiens cDNA clone IMAGE:258406 3' similar to gb:X65873 KINESIN HEAVY CHAIN (HUMAN);
7342	19869	32734	2.3	1.0E-49	N25884.1	EST_HUMAN	yw78g12.s1 Soares placenta_8tc9weeks_2NbHP8tc9W Homo sapiens cDNA clone IMAGE:258406 3' similar to gb:X65873 KINESIN HEAVY CHAIN (HUMAN);
8023	20585	33467	1.23	1.0E-49	11321580	NT	Homo sapiens succinate-CoA ligase, GDP-forming, alpha subunit (SUCLG1), mRNA
8023	20585	33468	1.23	1.0E-49	11321580	NT	Homo sapiens succinate-CoA ligase, GDP-forming, alpha subunit (SUCLG1), mRNA
8609	21148		0.93	1.0E-49	9694184	NT	Homo sapiens RNA binding motif protein 7 (LOC51120), mRNA
8923	21461	34378	1.26	1.0E-49	BE409340.1	EST_HUMAN	601300992F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635398 5'
10033	22528	35523	1.26	1.0E-49	AL043129.2	EST_HUMAN	DKFZp434D2423 r1 434 (synonym: hhes3) Homo sapiens cDNA clone DKFZp434D2423 5'
10927	23445	36466	2.28	1.0E-49	AV751477.1	EST_HUMAN	AV751477 NPD Homo sapiens cDNA clone NPDAWE04 5'
11190	23695	36744	3.48	1.0E-49	11427366	NT	Homo sapiens brefeldin A-inhibited guanine nucleotide-exchange protein 1 (BIG1), mRNA
11653	24081		1.39	1.0E-49	BE159343.1	EST_HUMAN	MRO-HT0407-010200-006-f02 HT0407 Homo sapiens cDNA
12015	24314		2.46	1.0E-49	11418322	NT	Homo sapiens cathelin EGF LAG seven-pass G-type receptor 1 (CELSR1), mRNA
5536	25117		0.88	9.0E-50	BE295758.1	EST_HUMAN	601176250F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3531588 5'
181	12843	25327	2.91	8.0E-50	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
748	13368	25862	1.7	8.0E-50	X95097.2	NT	Homo sapiens mRNA for VIP receptor 2
748	13368	25863	1.7	8.0E-50	X95097.2	NT	Homo sapiens mRNA for VIP receptor 2
1070	13675		6.61	8.0E-50	AF000573.1	NT	Homo sapiens homogenisate 1,2-dioxigenase gene, complete cds
1800	14390	26835	2.81	8.0E-50	4501890	NT	Homo sapiens actinin, alpha 1 (ACTN1) mRNA
2522	15086	27658	1	8.0E-50	7706394	NT	Homo sapiens p47 (LOC51674), mRNA
2522	15086	27659	1	8.0E-50	7706394	NT	Homo sapiens p47 (LOC51674), mRNA
2723	15278	27845	0.98	8.0E-50	4826658	NT	Homo sapiens capping protein (actin filament) muscle Z-line, beta (CAPZB), mRNA
4182	16772	29221	0.99	8.0E-50	AL163281.2	NT	Homo sapiens chromosome 21 segment HS21C081
647	13270	25748	0.97	7.0E-50	BE089591.1	EST_HUMAN	QV0-BT0703-280400-211-e08 BT0703 Homo sapiens cDNA
6860	19614	32448	0.94	7.0E-50	BF091922.1	EST_HUMAN	RC6-TN0073-150900-011-A12 TN0073 Homo sapiens cDNA
6860	19614	32449	0.94	7.0E-50	BF091922.1	EST_HUMAN	RC6-TN0073-150900-011-A12 TN0073 Homo sapiens cDNA
7346	19872	32738	1.25	7.0E-50	AA627822.1	EST_HUMAN	nq59e12.s1 NCI_C6B Homo sapiens cDNA clone IMAGE:1148206 3' similar to gb:X69391 60S RIBOSOMAL PROTEIN L6 (HUMAN);
10636	23168	36179	22.7	7.0E-50	AI872137.1	EST_HUMAN	wm55g11.x1 NCI_CGAP_U12 Homo sapiens cDNA clone IMAGE:2439808 3'



Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4435	17021		0.62	6.0E-50	BE794381.1	EST_HUMAN	601589865F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943577 5'
8155	20696		6.9	6.0E-50	BED44076.1	EST_HUMAN	h038h04.x1 NCL_CGAP_U11 Homo sapiens cDNA clone IMAGE:3039611 3' similar to contains MER29.i3 MER29 repetitive element ;
10694	23224	36237	5.53	6.0E-50	AA312079.1	EST_HUMAN	EST182775 Jurkat T-cells VI Homo sapiens cDNA 5' end
10694	23224	36238	5.53	6.0E-50	AA312079.1	EST_HUMAN	EST182775 Jurkat T-cells VI Homo sapiens cDNA 5' end
1829	14418	26968	0.98	5.0E-50	BF332938.1	EST_HUMAN	CM0-BT0792-300500-398-b05 BT0792 Homo sapiens cDNA
1829	14418	26967	0.98	5.0E-50	BF332938.1	EST_HUMAN	CM0-BT0792-300500-398-b05 BT0792 Homo sapiens cDNA
9022	21559		4.65	5.0E-50	AA557683.1	EST_HUMAN	nl45ht0.s1 NCL_CGAP_P14 Homo sapiens cDNA clone IMAGE:1043683 similar to contains PTR5.i3 PTR5 repetitive element ;
11619	24061	37125	1.57	5.0E-50	AA403053.1	EST_HUMAN	z62b01.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:728889 5' similar to TR:G1335769 G1335769 GAG-POL POLYPROTEIN ;
950	13562		1.74	4.0E-50	AA601143.1	EST_HUMAN	h054e09.s1 NCL_CGAP_SS1 Homo sapiens cDNA clone IMAGE:1104520 3' similar to gb:X53741_mn1 FIBULIN-1, ISOFORM A PRECURSOR (HUMAN);
7285	19813	32669	1.04	4.0E-50	BE087536.1	EST_HUMAN	QV1-BT0681-280300-127412 BT0681 Homo sapiens cDNA
1982	14565		2.4	3.0E-50	M18048.1	NT	Human endogenous retrovirus RTVL-H2
3338	15948	28424	0.78	3.0E-50	AA746142.1	EST_HUMAN	cb03f06.s1 NCL_CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1322627 3'
3815	18415	28879	0.93	3.0E-50	AW755254.1	EST_HUMAN	CMYA5 Human cardiac muscle expression library Homo sapiens cDNA clone 4151935 similar to CMYA5 Cardiomyopathy associated gene 5
9882	19598	32427	1.45	3.0E-50	11421514	NT	Homo sapiens similar to sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3A (H. sapiens) (LOC83232), mRNA
7640	20152	33036	4.41	3.0E-50	AF233436.2	NT	Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-DSP1a mRNA, complete cds
7640	20152	33037	4.41	3.0E-50	AF233436.2	NT	Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-DSP1a mRNA, complete cds
8518	21057	33980	0.73	3.0E-50	9601589	NT	Homo sapiens ankyrin-like with transmembrane domains 1 (ANKTM1), mRNA
9732	22230	35207	1.32	3.0E-50	AB046818.1	NT	Homo sapiens mRNA for KIAA1598 protein, partial cds
9741	22239	35220	0.96	3.0E-50	11418514	NT	Homo sapiens t-complex 10 (a murine top homolog) (TCP10), mRNA
10412	22908	35903	0.67	3.0E-50	AB002297.1	NT	Human mRNA for KIAA0299 gene, partial cds
10981	23495	36524	1.76	3.0E-50	11436955	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
11339	23037	36046	5.96	3.0E-50	AJ245621.1	NT	Homo sapiens CTL2 gene
810	13427		9.29	2.0E-50	AF055066.1	NT	Homo sapiens MHC class 1 region
1118	13721	26233	4.82	2.0E-50	4557752	NT	Homo sapiens midline 1 (Opitz/BBB syndrome) (MID1) mRNA
1492	14084	26625	3.96	2.0E-50	AF138303.1	NT	Homo sapiens decorin D mRNA, complete cds, alternatively spliced
3326	15936	28412	0.61	2.0E-50	AF111688.2	NT	Homo sapiens serine palmitoyl transferase, subunit II gene, complete cds; and unknown genes

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4347	18934	29375	0.6	2.0E-50	D86424.1	NT	Mus musculus mRNA for high-sulfur keratin protein, partial cds
8258	20799	33716	1.24	2.0E-50	AB038182.1	NT	Homo sapiens TFF gene cluster for tridact factor, complete cds
8258	20799	33717	1.24	2.0E-50	AB038182.1	NT	Homo sapiens TFF gene cluster for tridact factor, complete cds
8393	20933	33854	9.32	2.0E-50	X06956.1	NT	Human HALPHA44 gene for alpha-tubulin, exons 1-3
8393	20933	33855	9.32	2.0E-50	X06956.1	NT	Human HALPHA44 gene for alpha-tubulin, exons 1-3
9799	22287	35281	2.89	2.0E-50	9910293	NT	Mus musculus keratin complex 2, gene 6g (Krt2-6g), mRNA
9799	22287	35282	2.89	2.0E-50	9910293	NT	Mus musculus keratin complex 2, gene 6g (Krt2-6g), mRNA
11512	23960		2.09	2.0E-50	AF023861.1	NT	Macaca mulatta cyclophilin A mRNA, complete cds
487	13120	25608	1.58	1.0E-50	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
2403	14971		6.87	1.0E-50	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
10095	22590	35583	0.77	1.0E-50	D11078.1	NT	Homo sapiens RGH2 gene, retrovirus-like element
6136	18750	31507	0.89	9.0E-51	AW511225.1	EST_HUMAN	h444e02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2912378 3' similar to TR:Q95636
6372	18976	31754	0.69	9.0E-51	AA744837.1	EST_HUMAN	O95636 CAMP-REGULATED GUANINE NUCLEOTIDE EXCHANGE FACTOR II.;
8606	21145	34060	0.7	9.0E-51	AI791154.1	EST_HUMAN	ny67h03.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1283381 3'
9248	21774	34725	1.16	9.0E-51	AA043738.1	EST_HUMAN	ab23g04.x5 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:841686 3' similar to SW_PSM_HUMAN Q04609 PROSTATE-SPECIFIC MEMBRANE ANTIGEN ;
9420	21929	34875	0.52	9.0E-51	AI791154.1	EST_HUMAN	ab23g04.x5 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:486352 5'
9420	21929	34876	0.52	9.0E-51	AI791154.1	EST_HUMAN	SW_PSM_HUMAN Q04609 PROSTATE-SPECIFIC MEMBRANE ANTIGEN ;
4532	17116	29561	2.81	8.0E-51	4503932	NT	SW_PSM_HUMAN Q04609 PROSTATE-SPECIFIC MEMBRANE ANTIGEN ;
4532	17116	29562	2.81	8.0E-51	4503932	NT	Homo sapiens glycine amidinotransferase (L-arginine:glycine amidinotransferase) (GATM) mRNA
4667	17249	29702	13.1	8.0E-51	AA610842.1	EST_HUMAN	np98e03.s1 NCI_CGAP_Lu1 Homo sapiens cDNA clone IMAGE:1142440 3' similar to gb.X12671_ma1
5319	17881	30300	1.68	8.0E-51	AF092132.1	NT	HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN A1 (HUMAN);
7648	20160	33047	2.06	8.0E-51	11439587	NT	Homo sapiens PAK2 mRNA, complete cds
9385	21808		0.99	8.0E-51	AU138590.1	EST_HUMAN	Homo sapiens PDZ-73 protein (PDZ-73/3NY-CO-36), mRNA
3051	15667	28145	0.72	7.0E-51	AW274720.1	EST_HUMAN	AU138590 PLACE1 Homo sapiens cDNA clone PLACE1008887 5'
3321	15831	28408	1.51	7.0E-51	AW889219.1	EST_HUMAN	xn34e03.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2695564 3' similar to TR:Q9Z340
3408	16017	28496	0.76	7.0E-51	AW274720.1	EST_HUMAN	QV4-NT0028-200400-180-d05 NT0028 Homo sapiens cDNA
4247	18835	29286	2.14	7.0E-51	AL079628.1	EST_HUMAN	xn34e03.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2695564 3' similar to TR:Q9Z340
							Q9Z340 ATYPICAL PKC SPECIFIC BINDING PROTEIN. ;
							DRFZp434B2229_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434B2229 5'

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4247	16835	29287	2.14	7.0E-51	AL079628.1	EST_HUMAN	DKFZp434B2229_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434B2228 5'
4443	17029	29469	1.69	7.0E-51	AW295603.1	EST_HUMAN	U1-H-BW0-ai-p-b-05-Q-UI.s1 NCL_CGAP_Sub6 Homo sapiens cDNA clone IMAGE:2728817 3'
11534	23982	37053	1.65	7.0E-51	AF161449.1	NT	Homo sapiens HSPC331 mRNA, partial cds
1575	14168	26699	17.64	6.0E-51	6678763	NT	Homo sapiens putative DNA binding protein (M98), mRNA
2022	14604	27169	5.19	6.0E-51	7657266	NT	Homo sapiens KIAA0929 protein Mix2 interacting nuclear target (MINT) homolog (KIAA0929), mRNA
3520	16125	26605	17.1	6.0E-51	7657266	NT	Homo sapiens KIAA0929 protein Mix2 interacting nuclear target (MINT) homolog (KIAA0929), mRNA
4397	16982	29426	1.09	6.0E-51	9910553	NT	Homo sapiens solute carrier family 2 (facilitated glucose transporter), member 9 (SLC2A9), mRNA
4397	16982	29427	1.09	6.0E-51	9910553	NT	Homo sapiens solute carrier family 2 (facilitated glucose transporter), member 9 (SLC2A9), mRNA
6142	18756	31514	57.08	6.0E-51	X01788.1	NT	Human haptoglobin related (Hpr) gene exon 3
6152	18765	31527	11.78	6.0E-51	AF070083.1	NT	Homo sapiens mitogen-activated protein kinase kinase 1 (MKK4) gene, exon 4
6152	18765	31528	11.76	6.0E-51	AF070083.1	NT	Homo sapiens mitogen-activated protein kinase kinase 1 (MKK4) gene, exon 4
6858	19592	32424	1.05	6.0E-51	4508736	NT	Homo sapiens ribosomal protein S6 kinase, 70kD, polypeptide 1 (RPS6KB1) mRNA
6972	19549	32373	0.71	6.0E-51	11416751	NT	Homo sapiens non-kinase Cdc42 effector protein SPEC2 (LOC56990), mRNA
7044	18084	30454	2.22	6.0E-51	11429685	NT	Homo sapiens cerebral cell adhesion molecule (LOC51148), mRNA
9084	21601	34530	0.68	6.0E-51	11428525	NT	Homo sapiens hypothetical protein FLJ11042 (FLJ11042), mRNA
9084	21601	34531	0.68	6.0E-51	11428525	NT	Homo sapiens hypothetical protein FLJ11042 (FLJ11042), mRNA
9601	22101	35084	1.79	6.0E-51	7661535	NT	Homo sapiens B9 protein (B9), mRNA
9677	22176	35151	1.35	6.0E-51	U50093.1	NT	Human ankyrin (ANK1) gene, exon 2
11136	23644	36684	1.83	6.0E-51	11526289	NT	Homo sapiens interleukin 17 receptor (IL17R), mRNA
11403	23854	36919	1.58	6.0E-51	5453949	NT	Homo sapiens protein phosphatase 2, regulatory subunit B (B56), alpha isoform (PPP2R5A) mRNA
11403	23854	36920	1.58	6.0E-51	5453949	NT	Homo sapiens protein phosphatase 2, regulatory subunit B (B56), alpha isoform (PPP2R5A) mRNA
824	13441	25948	6.74	5.0E-51	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
836	13452	25982	1.38	5.0E-51	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
1028	15431	28153	1.01	5.0E-51	AL133204.1	NT	Novel human gene mapping to chromosome X
1651	14243	26777	0.99	5.0E-51	5031980	NT	Homo sapiens 26S proteasome-associated pad1 homolog (POH1) mRNA
2629	15191	27759	9.09	5.0E-51	AJ007558.1	NT	Homo sapiens mRNA for nucleoporin 155
4017	16615	29088	1.21	5.0E-51	M30938.1	NT	Human Ku (p70/p80) subunit mRNA, complete cds
4017	16615	29089	1.21	5.0E-51	M30938.1	NT	Human Ku (p70/p80) subunit mRNA, complete cds
5231	17785	30214	1.98	5.0E-51	AB037832.1	NT	Homo sapiens mRNA for KIAA1411 protein, partial cds
11089	23581	36621	2.02	5.0E-51	BE501320.1	EST_HUMAN	7a41a02.x1 NCL_CGAP_GC8 Homo sapiens cDNA clone IMAGE:3221258 3'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11160	23667	36712	4.75	5.0E-51	5803136	NT	Homo sapiens RNA binding motif protein 3 (RBM3), mRNA
140	12805	25294	15.49	3.0E-51	AI587348.1	EST_HUMAN	tr81c09.x1 NCI_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2224720 3' similar to gb:M26326 KERATIN, TYPE I CYTOSKELETAL 18 (HUMAN);
1218	13818	26333	34.32	3.0E-51	AI587348.1	EST_HUMAN	tr81c09.x1 NCI_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2224720 3' similar to gb:M26326 KERATIN, TYPE I CYTOSKELETAL 18 (HUMAN);
4420	17005	29448	2.04	3.0E-51	AL159142.1	NT	Novel human gene mapping to chromosome 22
7579	20095	32972	1.16	3.0E-51	R15914.1	EST_HUMAN	y447c08.r1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:53233 5' similar to gb:M14123_cds4 RETROVIRUS-RELATED POL POLYPROTEIN (HUMAN); contains LTR5 repetitive element;
8773	21312		6.15	3.0E-51	M29063.1	NT	Human hnRNP C2 protein mRNA
8968	25124		0.6	3.0E-51	AW583777.1	EST_HUMAN	ia04d05.y1 Human Pancreatic Islets Homo sapiens cDNA 5'
12348	24529		2.15	3.0E-51	AF003528.1	NT	Homo sapiens X-linked arylidic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
389	13035	25524	2.03	2.0E-51	4507798	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A) mRNA
717	13338	25824	0.94	2.0E-51	BE391063.1	EST_HUMAN	601285694F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3607463 5'
717	13338	25825	0.94	2.0E-51	BE391063.1	EST_HUMAN	601285694F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3607463 5'
1726	14317	26860	5.61	2.0E-51	AA233332.1	EST_HUMAN	z30a05.r1 Stragene NT2 neuronal precursor 937230 Homo sapiens cDNA clone IMAGE:664880 5' similar to TR:G233226 G233226 RTVL-H PROTEIN; contains LTR7.13 LTR7 repetitive element;
3795	16395	28860	2.71	2.0E-51	AI492415.1	EST_HUMAN	ti27g03.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2131732 3'
4592	17175	29621	1.73	2.0E-51	AW137826.1	EST_HUMAN	UIH-B11-adj-d-02-0-J1.st NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2716851 3'
5630	18259	30730	0.76	2.0E-51	AI732851.1	EST_HUMAN	db34f09.x5 NCI_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1325609 3' similar to SW:NMET_MOUSE P35436 GLUTAMATE [NMMDA]RECEPTOR SUBUNIT EPSILON 1 PRECURSOR;
5630	18259	30731	0.76	2.0E-51	AI732851.1	EST_HUMAN	db34f09.x5 NCI_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1325609 3' similar to SW:NMET_MOUSE P35436 GLUTAMATE [NMMDA]RECEPTOR SUBUNIT EPSILON 1 PRECURSOR;
6166	18778	31542	3.29	2.0E-51	BE782015.1	EST_HUMAN	601470446F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3873563 5'
7350	19876	32867	0.77	2.0E-51	AF219927.1	NT	Homo sapiens diacylglycerol kinase iota (DGKI) gene, exon 23
7480	20002	32867	1	2.0E-51	7662349	NT	Homo sapiens cell recognition molecule Caspr2 (KIAA0868), mRNA
8632	21171	34088	2.06	2.0E-51	BE901994.1	EST_HUMAN	601676787F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3955613 5'
8632	21171	34089	2.06	2.0E-51	BE901994.1	EST_HUMAN	601676787F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3955613 5'
8964	21502	34424	0.95	2.0E-51	11037064	NT	Homo sapiens disrupted in schizophrenia 1 (DISC1), mRNA
9431	21957	34905	1.48	2.0E-51	AI917078.1	EST_HUMAN	ts74a07.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2236980 3' similar to SW:TRKC_HUMAN Q16288 NT-3 GROWTH FACTOR RECEPTOR PRECURSOR;
9521	22021	34978	5.22	2.0E-51	BE165980.1	EST_HUMAN	MR3-HT0487-150200-113-g01 HT0487 Homo sapiens cDNA

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9537	22037	34997	0.61	2.0E-51	AB007926.1	NT	Homo sapiens mRNA for KIAA0457 protein, partial cds
10329	22823	35819	1.73	2.0E-51	AV682474.1	EST_HUMAN	AV682474 GKB Homo sapiens cDNA clone GKBAGF05 5'
10368	22862	35855	1.03	2.0E-51	AA378559.1	EST_HUMAN	EST81296 Synovial sarcoma Homo sapiens cDNA 5' end
11207	18259	30730	11.47	2.0E-51	A1732851.1	EST_HUMAN	ob34f09.x5 NCI CGAP Kid5 Homo sapiens cDNA clone IMAGE:1325609 3' similar to SW:NME1_MOUSE P35438 GLUTAMATE [NMDA] RECEPTOR SUBUNIT EPSILON 1 PRECURSOR ;
11207	18259	30731	11.47	2.0E-51	A1732851.1	EST_HUMAN	ob34f09.x6 NCI CGAP Kid5 Homo sapiens cDNA clone IMAGE:1325609 3' similar to SW:NME1_MOUSE P35438 GLUTAMATE [NMDA] RECEPTOR SUBUNIT EPSILON 1 PRECURSOR ;
12343	24524	30924	2.6	2.0E-51	11419159	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (trithorax (Drosophila) homolog); translocated to, 4 (MLLT4), mRNA
119	12790	25272	27.93	1.0E-51	4503528	NT	Homo sapiens eukaryotic translation initiation factor 4A, isoform 1 (EIF4A1) mRNA
1541	14133		28.47	1.0E-51	AV742248.1	EST_HUMAN	AV742248 CB Homo sapiens cDNA clone CBFBCG12 5'
4498	17082	29531	1	1.0E-51	4759071	NT	Homo sapiens small inducible cytokine subfamily A (Cys-Cys), member 15 (SCYA15) mRNA
4498	17082	29532	1	1.0E-51	4759071	NT	Homo sapiens small inducible cytokine subfamily A (Cys-Cys), member 15 (SCYA15) mRNA
5588	18219	30669	2.68	1.0E-51	T19862.1	EST_HUMAN	b120561 Testis 1 Homo sapiens cDNA clone b12056
7645	20157	33044	0.85	1.0E-51	A1572532.1	EST_HUMAN	ic39g02.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:2089106 3'
7844	20386	33289	7	1.0E-51	BF434359.1	EST_HUMAN	7c98b02.x1 NCI CGAP_Ov18 Homo sapiens cDNA clone IMAGE:3844091 3' similar to TR:P87892 P87892 PROTEASE ;
11813	25129		3.01	1.0E-51	AV760590.1	EST_HUMAN	AV760590 MDS Homo sapiens cDNA clone MDSCB802 5'
10588	23104	36118	1.71	9.0E-52	R91638.1	EST_HUMAN	Yq10h04.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:196587 5' similar to SP:YGAF_ECOLI P37339 HYPOTHETICAL PROTEIN IN GABP 3'REGION ;
10568	23104	36119	1.71	9.0E-52	R91638.1	EST_HUMAN	Yq10h04.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:196587 5' similar to SP:YGAF_ECOLI P37339 HYPOTHETICAL PROTEIN IN GABP 3'REGION ;
12105	24367		6.53	9.0E-52	AA777621.1	EST_HUMAN	295a07.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:448500 3' similar to contains THR13 THR repetitive element ;
163	12826	25313	8	8.0E-52	AA720574.1	EST_HUMAN	hw21g02.s1 NCI CGAP_G080 Homo sapiens cDNA clone IMAGE:1241138 3' similar to contains THR13 THR repetitive element ;
1543	14135	26689	1.32	8.0E-52	X84900.1	NT	H. sapiens mRNA for laminin-5, alpha3b chain
1694	14286	26821	2.12	8.0E-52	11968028	NT	Homo sapiens hypothetical protein FLJ13556 similar to N-myc downstream regulated 3 (FLJ13556), mRNA
1694	14286	26822	2.12	8.0E-52	11968028	NT	Homo sapiens hypothetical protein FLJ13556 similar to N-myc downstream regulated 3 (FLJ13556), mRNA
4066	14286	26821	6.96	8.0E-52	11968028	NT	Homo sapiens hypothetical protein FLJ13556 similar to N-myc downstream regulated 3 (FLJ13556), mRNA

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Table 4

Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4066	14286	26822	6.96	8.0E-52	11968028	NT	Homo sapiens hypothetical protein FLJ13556 similar to N-myc downstream regulated 3 (FLJ13556), mRNA
7526	20046	32915	1.8	8.0E-52	11416585	NT	Homo sapiens transforming growth factor, beta-induced, 68kD (TGFB1), mRNA
7526	20046	32916	1.8	8.0E-52	11416585	NT	Homo sapiens transforming growth factor, beta-induced, 68kD (TGFB1), mRNA
8943	21481	34403	1.39	7.0E-52	W56471.1	EST_HUMAN	z59a06.r1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:326578 5' similar to contains Alu repetitive element;
1229	13828		0.85	6.0E-52	BE072409.1	EST_HUMAN	QV3-BT0537-271299-049-407 BT0537 Homo sapiens cDNA
1732	14323	26865	2.63	6.0E-52	AF109907.1	NT	Homo sapiens S164 gene, partial cds; PS1 and hypothetical protein genes, complete cds; and S171 gene, partial cds
5902	18524	31249	2.12	6.0E-52	AI208794.1	EST_HUMAN	qg44f04.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1838047 3'
11086	23598	36635	1.83	6.0E-52	BE048172.1	EST_HUMAN	tz46h04.y1 NCI_CGAP_Brm52 Homo sapiens cDNA clone IMAGE:2291671 5' similar to SW:PGBM_MOUSE Q05793 BASEMENT MEMBRANE-SPECIFIC HEPARAN SULFATE PROTEOGLYCAN CORE PROTEIN PRECURSOR ;
4535	17119	29566	1.77	5.0E-52	Z78938.1	NT	H sapiens flow-sorted chromosome 6 HindIII fragment, SC6pA18H7
1702	14295	26830	1.27	4.0E-52	AF257318.1	NT	Homo sapiens SH3-containing protein SH3GLB1 mRNA, complete cds
1823	14412	26957	1.35	4.0E-52	4758843	NT	Homo sapiens nucleoprotein 155kD (NUP155) mRNA
4000	16598	28070	0.62	4.0E-52	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
4849	17427	29879	0.77	4.0E-52	AI766814.1	EST_HUMAN	w89b02.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2400459 3'
5490	18124	30531	1.2	4.0E-52	4506132	NT	Homo sapiens phosphoribosyl pyrophosphate synthetase-associated protein 2 (PRPSAP2) mRNA
5490	18124	30532	1.2	4.0E-52	4506132	NT	Homo sapiens phosphoribosyl pyrophosphate synthetase-associated protein 2 (PRPSAP2) mRNA
7982	20524	33430	1.63	4.0E-52	BE622032.1	EST_HUMAN	601440667F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3915836 5'
8471	21011	33928	5.51	4.0E-52	11417035	NT	Homo sapiens hydroxysteroid (17-beta) dehydrogenase 4 (HSD17B4), mRNA
11933	24267		5.12	4.0E-52	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
12458	24589		13.96	4.0E-52	AB002059.1	NT	Homo sapiens DNA for Human P2XM, complete cds
12601	24687		1.57	4.0E-52	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
4166	16757		12.28	3.0E-52	11437042	NT	Homo sapiens hypothetical protein FLJ10675 (FLJ10675), mRNA
568	13218	25694	4.18	2.0E-52	M10976.1	NT	Human endogenous retroviral DNA (4-1), complete retroviral segment
568	13218	25695	4.18	2.0E-52	M10976.1	NT	Human endogenous retroviral DNA (4-1), complete retroviral segment
1793	14383	26928	2.64	2.0E-52	AB007896.1	NT	Homo sapiens KIAA0439 mRNA, partial cds
2544	15108	27681	1.1	2.0E-52	BE207575.1	EST_HUMAN	b66b07.y1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3030421 5' similar to gb.X16493 M.musculus mRNA for Zpf-1 zinc finger protein (MOUSE);
2764	15318		5.55	2.0E-52	BF677892.1	EST_HUMAN	602084710F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4248891 5'
5113	17885	30121	3.51	2.0E-52	AL137188.3	NT	Novel human gene mapping to chromosome 20, similar to membrane transporters
5881	18503	31229	3.32	2.0E-52	AW848041.1	EST_HUMAN	IL3-CT0214-231299-053-E12 CT0214 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6505	19105	31890	1.86	2.0E-52	11141888	NT	Homo sapiens interleukin 21 receptor (IL21R), mRNA
6814	19405	32221	0.89	2.0E-52	AB028004.1	NT	Homo sapiens mRNA for KIAA1081 protein, partial cds
7022	19556	32381	0.88	2.0E-52	AI792146.1	EST_HUMAN	os45d12.y5 NCI_CGAP_Br2 Homo sapiens cDNA clone IMAGE:1608311 5'
8587	21126		10.89	2.0E-52	AF147880.1	NT	Macaca mulatta beta-tubulin mRNA, complete cds
8866	21405	34329	0.82	2.0E-52	AA778795.1	EST_HUMAN	z145g05.s1 Soares fetal liver spleen INFILS_S1 Homo sapiens cDNA clone IMAGE:453272 3'
9400	21823		1.25	2.0E-52	4758789	NT	Homo sapiens NADH dehydrogenase (ubiquinone) Fe-S protein 5 (15kD) (NADH-coenzyme Q reductase) (NDUFS5) mRNA
10024	22519	35514	5.62	2.0E-52	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
10024	22519	35515	5.62	2.0E-52	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
11083	23595	36630	6.08	2.0E-52	AI831462.1	EST_HUMAN	wj49c04.x1 NCI_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2406150 3' similar to contains THR.b2 THR repetitive element
11083	23595	36631	6.08	2.0E-52	AI831462.1	EST_HUMAN	wj49c04.x1 NCI_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2406150 3' similar to contains THR.b2 THR repetitive element
11094	23606	36648	3.85	2.0E-52	AV715377.1	EST_HUMAN	AV715377 DGB Homo sapiens cDNA clone DCBAIE03 5'
11231	23762		1.87	2.0E-52	W70260.1	EST_HUMAN	z148g12.17 Soares fetal heart NBH19W Homo sapiens cDNA clone IMAGE:344038 5'
11484	23933		3.4	2.0E-52	11417690	NT	Homo sapiens LIM domain kinase 2 (LIMK2), mRNA
11741	25099	30500	14.03	2.0E-52	AW236297.1	EST_HUMAN	xn72e07.x1 NCI_CGAP_CML1 Homo sapiens cDNA clone IMAGE:2700036 3' similar to contains Alu repetitive element; contains element LTR2 repetitive element
12154	24396		3.83	2.0E-52	AI808985.1	EST_HUMAN	wf87d05.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2360849 3' similar to TR:Q16859 Q16859 CARBOXYLESTERASE
558	13189	25668	1.59	1.0E-52	AA634445.1	EST_HUMAN	zu75h12.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:743879 3'
1414	14007	26535	11.81	1.0E-52	4504026	NT	Homo sapiens glutamate-ammonia ligase (glutamine synthase) (GLUL), mRNA
2573	15136		1.75	1.0E-52	4502238	NT	Homo sapiens arylsulfatase D (ARSD), transcript variant 1, mRNA
3095	15710	28181	1.65	1.0E-52	S61070.1	NT	pol=reverse transcriptase homolog (retroviral element) [human, endogenous retroviral element RTVL-Hp1, Genomic, 860 nt]
5536	18168	30582	4.64	1.0E-52	M29426.1	NT	Human P-glycoprotein (MDR1) gene, exon 4
6527	19127	31921	2.18	1.0E-52	U38964.1	NT	Human PMS2 related (hPMSR2) gene, complete cds
7458	19981	32848	2.21	1.0E-52	X07292.1	NT	Human aldolase C gene for fructose-1,6-bisphosphate aldolase
8401	20941		1.24	1.0E-52	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
9116	21652	34593	0.61	1.0E-52	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
10469	22963		1.13	1.0E-52	AW020370.1	EST_HUMAN	df08g05.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2483145 5'
10479	22973		0.78	1.0E-52	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
10646	23178	36191	10.04	1.0E-52	U48296.1	NT	Homo sapiens protein tyrosine phosphatase PTPCAAX1 (hPTPCAAX1) mRNA, complete cds
10718	23244		2.37	1.0E-52	11426321	NT	Homo sapiens proteasome (prosome, macropain) subunit, beta type, 2 (PSMB2), mRNA

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Single Exon Probes Expressed In Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3859	16457	28920	1.13	9.0E-53	4508064	NT	Homo sapiens protein kinase, cAMP-dependent, regulatory, type II, beta (PRKAR2B) mRNA
5186	17751	30182	0.91	9.0E-53	7661713	NT	Homo sapiens predicted osteoblast protein (GS3786), mRNA
11867	24267		3.79	7.0E-53	BF238465.1	EST_HUMAN	601804771F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4132793 5'
12432	24969		5.2	7.0E-53	AI421782.1	EST_HUMAN	tt44607.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:2086077 3' similar to contains THR.t1
4174	16765	29213	4.45	5.0E-53	4758543	NT	Homo sapiens heterogeneous nuclear ribonucleoprotein C (C1/C2) (HNRPC) mRNA
5364	17924	30338	1	5.0E-53	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21C082
12035	24324		1.58	5.0E-53	AW813563.1	EST_HUMAN	RC3-ST0197-151098-011-g10 ST0197 Homo sapiens cDNA
53	12733	25200	1.15	4.0E-53	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
53	12733	25201	1.15	4.0E-53	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
4947	17522	29984	0.89	4.0E-53	7705414	NT	Homo sapiens hook1 protein (HOOK1), mRNA
9337	21851		0.66	4.0E-53	AI813037.1	EST_HUMAN	ty0804.x1 NCI_CGAP_U13 Homo sapiens cDNA clone IMAGE:2278327 3'
9671	22170		0.71	4.0E-53	F13080.1	EST_HUMAN	HSC3ID041 normalized infant brain cDNA Homo sapiens cDNA clone c-3id04
11091	23603	36842	3.98	4.0E-53	BF128701.1	EST_HUMAN	601810969F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4053977 5'
11091	23603	36843	3.98	4.0E-53	BF128701.1	EST_HUMAN	601810969F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4053977 5'
2684	15242	27810	2.09	3.0E-53	AB028898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
3794	16394	28859	1.19	3.0E-53	AW050836.1	EST_HUMAN	wz22c07.x1 Soares_Dieckgraefe_colon_NHCD Homo sapiens cDNA clone IMAGE:2558786 3'
4691	17273	28721	0.85	3.0E-53	AW803563.1	EST_HUMAN	IL2-UM0081-240300-055-D03 UM0081 Homo sapiens cDNA
5618	18247	30698	0.89	3.0E-53	AF001212.1	NT	Homo sapiens 26S proteasome subunit 9 mRNA, complete cds
5808	18433	31154	0.91	3.0E-53	11526297	NT	Homo sapiens MIL1 protein (MIL1), mRNA
5341	18947	31724	0.89	3.0E-53	BE160025.1	EST_HUMAN	QV1-HT0412-280300-123-c04 HT0412 Homo sapiens cDNA
7155	19687	32530	0.92	3.0E-53	Y10388.3	NT	H. sapiens graf gene
7155	19687	32531	0.92	3.0E-53	Y10388.3	NT	H. sapiens graf gene
8246	20787	33706	10.03	3.0E-53	S72043.1	NT	GIF-growth inhibitory factor [human, brain, Genomic, 2015 nt]
8793	21332	34256	0.51	3.0E-53	10835090	NT	Homo sapiens bone morphogenetic protein 5 (BMP5), mRNA
8987	21525		7.06	3.0E-53	5901850	NT	Homo sapiens FGFR1 oncogene partner (FOP), mRNA
11867	24221		1.27	3.0E-53	11426423	NT	Homo sapiens acetyl-Coenzyme A carboxylase alpha (ACACA), mRNA
483	13116		32.96	2.0E-53	AA366556.1	EST_HUMAN	EST77525 Pancreas tumor III Homo sapiens cDNA 5' end
2365	14936	27508	5.15	2.0E-53	U78027.1	NT	Homo sapiens Bruton's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3) genes, complete cds
2574	15137		12.23	2.0E-53	4502316	NT	Homo sapiens ATPase, H+ transporting, lysosomal (vacuolar proton pump) 31kD; Vacuolar proton-ATPase, subunit E; V-ATPase, subunit E (ATP6E), mRNA



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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source:	Top Hit Descriptor
2752	15307	27871	0.9	2.0E-53	4757915	NT	Homo sapiens core-binding factor, runt domain, alpha subunit 2; translocated to, 1; cyclin D-related (CBFA2T1) mRNA
2752	15307	27872	0.9	2.0E-53	4757915	NT	Homo sapiens core-binding factor, runt domain, alpha subunit 2; translocated to, 1; cyclin D-related (CBFA2T1) mRNA
3255	15867	28347	0.65	2.0E-53	7705687	NT	Homo sapiens leucine aminopeptidase (LOC51058), mRNA
3282	15893	28372	0.67	2.0E-53	AF083822.1	NT	Homo sapiens dihydropyridine receptor alpha 2 subunit (CACNA2D1) gene, exon 6
4133	16725	29179	2.15	2.0E-53	M61873.1	NT	Human Krueppel-related DNA-binding protein (TF34) gene, partial cds
5819	18248	30699	3.27	2.0E-53	BF334740.1	EST_HUMAN	PM1-CT0398-170800-001-g03 CT0398 Homo sapiens cDNA
5819	18248	30700	3.27	2.0E-53	BF334740.1	EST_HUMAN	PM1-CT0398-170800-001-g03 CT0398 Homo sapiens cDNA
7812	20355	33263	0.84	2.0E-53	AW875598.1	EST_HUMAN	EST387707 MAGE resequences, MAGN Homo sapiens cDNA
7949	20491		0.83	2.0E-53	AA095652.1	EST_HUMAN	IS429.seq.F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA 5'
8329	21843		17.91	2.0E-53	AW245676.1	EST_HUMAN	2822665.5prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2822665 5'
1495	14087	28627	1.88	1.0E-53	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region; segment 2/2
3456	16063	28538	1.4	1.0E-53	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 gene, complete cds)
4220	16808	28256	0.67	1.0E-53	AV714177.1	EST_HUMAN	AV714177 DCB Homo sapiens cDNA clone DCBAWF09 5'
5099	17671	30110	1.08	1.0E-53	BE296386.1	EST_HUMAN	601176725F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3531919 5'
6794	19385	32201	1.34	1.0E-53	BF364201.1	EST_HUMAN	CM4-NN1029-150800-543-602 NN1029 Homo sapiens cDNA
7295	19823	32682	0.93	1.0E-53	BE012071.1	EST_HUMAN	RC5-BN1058-270400-031-D01 BN1058 Homo sapiens cDNA
7876	20418	33328	0.5	1.0E-53	AA249072.1	EST_HUMAN	II9571.seq.F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA 5'
8018	21555	34483	15.04	1.0E-53	X79536.1	NT	H. sapiens mRNA for hnRNPcore protein A1
3290	15901	28381	0.57	9.0E-54	4504116	NT	Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1) mRNA
5505	24743	30549	5.34	9.0E-54	4506786	NT	Homo sapiens IQ motif containing GTPase activating protein 1 (IQGAP1) mRNA
221	12882	25387	3.54	8.0E-54	BE386785.1	EST_HUMAN	601272863F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3814031 5'
1875	14481	27018	1.62	8.0E-54	4504610	NT	Homo sapiens insulin-like growth factor 2 receptor (IGF2R) mRNA
4841	17419	28871	0.6	8.0E-54	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
4841	17419	29872	0.6	8.0E-54	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
6092	18708	31456	20.41	8.0E-54	6005700	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 8 (ABCA8), mRNA
407	13082	25574	1.55	7.0E-54	AA812937.1	EST_HUMAN	af78c12.s1 Soares tests_NHT Homo sapiens cDNA clone 1377046 3' similar to contains MER30.13 MER30 repetitive element ;
1870	14456	27013	2.37	7.0E-54	Y16845.1	NT	Homo sapiens mRNA for monocyte chemotactic protein-2
2246	14820	27395	5.06	7.0E-54	N27177.1	EST_HUMAN	yw68d12.s1 Soares placenta 806weeks_2NbhP80c9W Homo sapiens cDNA clone IMAGE:257399 3' similar to contains LTR7 b3 LTR7 repetitive element ;
4694	17276		23.4	7.0E-54	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10034	22529	35524	2.32	7.0E-54	11417222	NT	Homo sapiens similar to nuclear factor related to kappa B binding protein (H. sapiens) (LOC63182), mRNA
11171	23678						qb67g03.x1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:1705204 3' similar to contains OFR.11 OFR repetitive element;
26	12705	25163	7.41	7.0E-54	AI160189.1	EST_HUMAN	Homo sapiens DNA for MCB, exon 4, 5 and partial cds
408	13083	25575	2.31	6.0E-54	AB003818.1	NT	Homo sapiens hypothetical protein DKFp434M035 (DKFp434M035), mRNA
408	13083	25576	1.14	6.0E-54	8922148	NT	Homo sapiens hypothetical protein DKFp434M035 (DKFp434M035), mRNA
1917	14502	27058	1.44	6.0E-54	8922148	NT	Homo sapiens lymphocyte antigen 75 (LY75) mRNA, and translated products
1917	14502	27059	1.44	6.0E-54	4505052	NT	Homo sapiens lymphocyte antigen 75 (LY75) mRNA, and translated products
3322	15832	28409	1.06	6.0E-54	8922148	NT	Homo sapiens hypothetical protein DKFp434M035 (DKFp434M035), mRNA
4076	16672	29133	35.06	6.0E-54	4502872	NT	Homo sapiens chloride channel 6 (CLCN6) mRNA
4561	17144	29591	0.88	6.0E-54	AV754746.1	EST_HUMAN	AV754746 TP Homo sapiens cDNA clone TPGAAC10 5'
4969	17643	29985	1.07	6.0E-54	4505806	NT	Homo sapiens phosphatidylinositol 4-kinase, catalytic, alpha polypeptide (PIK4CA) mRNA
5001	17574		1.81	6.0E-54	Y09946.1	NT	H. sapiens shc pseudogene, p86 isoform
5140	17574		2.26	6.0E-54	Y09946.1	NT	H. sapiens shc pseudogene, p86 isoform
11329	20027	36036	3.33	6.0E-54	AW813567.1	EST_HUMAN	RC9-ST0197-151099-011-f08 ST0197 Homo sapiens cDNA
2195	14771	27345	2.41	5.0E-54	P51523	SWISSPROT	ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2)
195	12855		111.77	4.0E-54	AF110103.1	NT	Tupala belangeri beta-actin mRNA, partial cds
							EST177696 Jurkat T-cells VI Homo sapiens cDNA 5' end similar to glyceraldehyde-3-phosphate dehydrogenase
991	13803	26117	69.58	4.0E-54	AA306784.1	EST_HUMAN	Human mRNA for KIAA0077 gene, partial cds
1841	14429	26981	2.97	4.0E-54	D38521.1	NT	Human mRNA for KIAA0077 gene, partial cds
1841	14429	26982	2.97	4.0E-54	D38521.1	NT	Human mRNA for KIAA0077 gene, partial cds
3238	15850		1.45	4.0E-54	AI935086.1	EST_HUMAN	w26d11.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2329269 3' similar to TR:O02711
97	12773	25255	9.57	3.0E-54	AA313487.1	EST_HUMAN	O02711 PRO-POL-DUTPASE POLYPROTEIN ;
2604	15166	27733	0.97	3.0E-54	AL110383.1	EST_HUMAN	EST185371 Cdon carcinoma (HCC) cell line Homo sapiens cDNA 5' end
6063	18680	31422	1.44	3.0E-54	4502434	NT	DKFp434E0731_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFp434E0731 5'
7422	19948	32811	1.54	3.0E-54	AA844081.1	EST_HUMAN	Homo sapiens BMX non-receptor tyrosine kinase (BMX) mRNA
7422	19948	32812	1.54	3.0E-54	AA844081.1	EST_HUMAN	ai92c08.s1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1388270 3'
10964	23479	38504	4.52	3.0E-54	BF345600.1	EST_HUMAN	ai92c08.s1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1388270 3'
							602019408F1 NCI_CGAP_Bn67 Homo sapiens cDNA clone IMAGE:4155121 5'
							z7012.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:727727 5' similar to TR:G191315
11247	23777	36834	4.44	3.0E-54	AA393362.1	EST_HUMAN	G191315 ANDROGEN-DEPENDENT EXPRESSED PROTEIN ;
11844	24208	31040	2.75	3.0E-54	AW954559.1	EST_HUMAN	EST366629 MAGC resequences, MAGC Homo sapiens cDNA
11885	-25059		4.05	3.0E-54	AW748965.1	EST_HUMAN	RC1-BT0313-131199-011-b09 BT0313 Homo sapiens cDNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
670	13294	25774	29.57	2.0E-54	5031900	NT	Homo sapiens killer cell lectin-like receptor subfamily G, member 1 (KLRG1), mRNA
1409	14002	26530	1.59	2.0E-54	4507184	NT	Homo sapiens nuclear antigen Sp100 (SP100) mRNA
1505	14188	26719	1.03	2.0E-54	AA655008.1	EST_HUMAN	n78a09.s1 NCL_CGAP_P3 Homo sapiens cDNA clone IMAGE:1204600 similar to contains element L1 repetitive element
2577	15199	27709	0.88	2.0E-54	AW163175.1	EST_HUMAN	eu92g03.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2763764 5' similar to SW:CU1.1_HUMAN Q13616 CULLIN HOMOLOG 1
2635	15195	27768	1.29	2.0E-54	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
2920	15537	28012	1.26	2.0E-54	AW057524.1	EST_HUMAN	wy60b12.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2552927 3' similar to TR:Q62084 Q62084 PHOSPHOLIPASE C NEIGHBORING
3602	16206		5.09	2.0E-54	AA532925.1	EST_HUMAN	n45g08.s1 NCL_CGAP_P9 Homo sapiens cDNA clone IMAGE:995488 similar to gb:X53777 60S RIBOSOMAL PROTEIN L23 (HUMAN);
3915	16513	28975	0.62	2.0E-54	4506376	NT	Homo sapiens mitogen-activated protein kinase kinase kinase 3 (MAP4K3), mRNA
3915	16513	28976	0.62	2.0E-54	4506376	NT	Homo sapiens mitogen-activated protein kinase kinase kinase 3 (MAP4K3), mRNA
4283	16869		2.42	2.0E-54	4502642	NT	Homo sapiens chaperonin containing T-complex subunit 6 (CCT6) mRNA
4536	17120		1.11	2.0E-54	AF208161.1	NT	Homo sapiens syncytin precursor, mRNA, complete cds
4541	17125		3.09	2.0E-54	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
5666	18293	30773	2.15	2.0E-54	4759069	NT	Homo sapiens small inducible cytokine subfamily A (Cys-Cys), member 14 (SCYA14) mRNA
5788	18413	31130	0.98	2.0E-54	BE047864.1	EST_HUMAN	tz43c11.y1 NCL_CGAP_Bn52 Homo sapiens cDNA clone IMAGE:2291348 5'
5935	18556	31284	3.66	2.0E-54	11428657	NT	Homo sapiens KIAA0100 gene product (KIAA0100), mRNA
6022	18841	31381	11.65	2.0E-54	AB046811.1	NT	Homo sapiens mRNA for KIAA1591 protein, partial cds
6022	18841	31382	11.65	2.0E-54	AB046811.1	NT	Homo sapiens mRNA for KIAA1591 protein, partial cds
6763	19356	32165	0.88	2.0E-54	AF008915.1	NT	Homo sapiens EVI5 homolog mRNA, complete cds
7177	19709	32557	8.13	2.0E-54	11426544	NT	Homo sapiens neurofibromin 1 (neurofibromatosis, von Recklinghausen disease, Watson disease) (NF1), mRNA
9547	22047	35008	3.27	2.0E-54	AB001025.1	NT	Homo sapiens mRNA for brain ryanodine receptor, complete cds
9922	22418	35092	1.45	2.0E-54	11429127	NT	Homo sapiens Janus kinase 2 (a protein tyrosine kinase) (JAK2), mRNA
10028	22523	35519	0.88	2.0E-54	11416762	NT	Homo sapiens serologically defined colon cancer antigen 10 (SDCCAG10), mRNA
10028	22523	35520	0.88	2.0E-54	11416762	NT	Homo sapiens serologically defined colon cancer antigen 10 (SDCCAG10), mRNA
11573	24020		3.33	2.0E-54	7657454	NT	Homo sapiens p53-related (zebrafish) homolog 1, containing BRCT domain (PEST), mRNA
12368	24539	30903	2.87	2.0E-54	8567387	NT	Homo sapiens period (Drosophila) homolog 3 (PER3), mRNA
4564	17147		1.23	1.0E-54	BF315418.1	EST_HUMAN	601899230F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4128535 5'
8684	21203	34121	0.84	1.0E-54	11417222	NT	Homo sapiens similar to nuclear factor related to kappa B binding protein (H. sapiens) (LOC83182), mRNA
10152	22647	35640	0.56	1.0E-54	AA412409.1	EST_HUMAN	zu10e09.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:731464 5'

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10152	22647	35641	0.56	1.0E-54	AA412409.1	EST_HUMAN	zu10e09.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:731484 5'
12547	24652		3.58	1.0E-54	AU077341.1	EST_HUMAN	AU077341 Sugano cDNA library Homo sapiens cDNA clone Zv6C880 similar to 5'-end region of Human
10262	22757	35744	0.81	9.0E-55	BE081469.1	EST_HUMAN	gamma-glutamyl transpeptidase mRNA, 5' end
1359	13953		0.91	8.0E-55	Y07829.2	NT	QV2-BT0635-160400-143-h12 BT0635 Homo sapiens cDNA
1362	13956		2.21	8.0E-55	Y07829.2	NT	Homo sapiens RFB30 gene for RING finger protein
11075	23587		2.49	8.0E-55	AW409714.1	EST_HUMAN	Homo sapiens RFB30 gene for RING finger protein
1120	13723	26236	1.55	7.0E-55	R09346.1	EST_HUMAN	fl02a02.x1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2980907 5'
8739	21278		1.75	7.0E-55	AW103839.1	EST_HUMAN	y22e04.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:127998 5' similar to
9109	21645	34585	1.34	7.0E-55	AA889581.1	EST_HUMAN	SP:C561_BOVIN P10897 CYTOCHROME ;
9142	21677	34620	1.88	7.0E-55	AU139909.1	EST_HUMAN	xd76c02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2603522 3' similar to TR:O60365
11087	23599	36636	14.07	7.0E-55	A1561056.1	EST_HUMAN	O60365 FOS39554_1.1 ;
11087	23599	36637	14.07	7.0E-55	A1561056.1	EST_HUMAN	ak28a11.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1407280 3'
12516	24985		9.8	7.0E-55	H23396.1	EST_HUMAN	AU139909 PLACE1 Homo sapiens cDNA clone PLACE1011576 5'
11389	23841	36906	2.37	6.0E-55	AB040934.1	NT	tg29f09.x1 NCI_CGAP_U11 Homo sapiens cDNA clone IMAGE:2210249 3'
1806	14396	26940	1.13	5.0E-55	AA704971.1	EST_HUMAN	tg29f09.x1 NCI_CGAP_U11 Homo sapiens cDNA clone IMAGE:2210249 3'
1806	14396	26941	1.13	5.0E-55	AA704971.1	EST_HUMAN	ym57g07.r1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:52444 5'
6661	19257	32060	1.88	5.0E-55		NT	Homo sapiens mRNA for KIAA1501 protein, partial cds
6661	19257	32061	1.88	5.0E-55		NT	z95b09.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:462617 3'
6772	24769	32174	2.24	5.0E-55		NT	z95b09.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:462617 3'
6772	24769	32175	2.24	5.0E-55		NT	Homo sapiens alylsulfatase E (chondrodysplasia punctata 1) (ARSE), mRNA
7337	19864	32728	0.79	5.0E-55	11434422	NT	Homo sapiens alylsulfatase E (chondrodysplasia punctata 1) (ARSE), mRNA
7936	20478	33388	0.65	5.0E-55	11528491	NT	Homo sapiens paraoxonase 2 (PON2) mRNA, and translated products
8974	21512	34435	2.35	5.0E-55	4502240	NT	Homo sapiens paraoxonase 2 (PON2) mRNA, and translated products
9243	21769		1.89	5.0E-55	4502240	NT	Homo sapiens speckle-type POZ protein (SPOP), mRNA
9950	22445	35425	1.55	5.0E-55	BE064386.1	EST_HUMAN	Homo sapiens BCL2-associated athanogene (BAG1), mRNA
9950	22445	35426	1.55	5.0E-55	AB014511.1	NT	Homo sapiens protein tyrosine phosphatase, receptor type, alpha polypeptide (PTPRA) mRNA
10122	22617	35608	0.93	5.0E-55	5453765	NT	Homo sapiens mRNA for KIAA0611 protein, partial cds
11925	24260		2.15	5.0E-55	11417972	NT	Homo sapiens mRNA for KIAA0611 protein, partial cds
59	15406	25209	1.97	4.0E-55	AW957694.1	EST_HUMAN	Homo sapiens nrl (chicken)-like 2 (NELL2), mRNA
700	13322	25809	41.63	4.0E-55		NT	Homo sapiens pscadillo (zabrafish) homolog 1, containing BRCT domain (PES1), mRNA
1489	14082	26621	1.12	4.0E-55	7661713	NT	EST370064 MAGE-ressequences, MAGE Homo sapiens cDNA
							Homo sapiens RNA binding motif protein, Y chromosome, family 1, member A1 (RBM1A1) mRNA
							Homo sapiens predicted osteoblast protein (GS3786), mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1489	14082	28622	1.12	4.0E-55	7661713	NT	Homo sapiens predicted osteoblast protein (GS3786), mRNA
1561	14153		1.02	4.0E-55	BF061411.1	EST_HUMAN	752b10.x1 Soares_NSF_F8_gw_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3390043 3' similar to contains L1.13 L1 repetitive element;
2071	14651	27222	1.47	4.0E-55	4506180	NT	Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 2 (PSMA2) mRNA
2071	14651	27223	1.47	4.0E-55	4506180	NT	Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 2 (PSMA2) mRNA
2132	14710	27281	8.27	4.0E-55	4503314	NT	Homo sapiens diacylglycerol kinase, gamma (90kD) (DGKG) mRNA
2132	14710	27282	8.27	4.0E-55	4503314	NT	Homo sapiens diacylglycerol kinase, gamma (90kD) (DGKG) mRNA
2349	14920	27495	1.64	4.0E-55	4507784	NT	Homo sapiens ubiquitin-conjugating enzyme E2 variant 1 (UBE2V1) mRNA
3318	15928	28403	1.01	4.0E-55	AL163300.2	NT	Homo sapiens chromosome 21 segment HS21C100
8285	20826		7.61	4.0E-55	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
11108	23618		4.93	4.0E-55	W28189.1	EST_HUMAN	43c5 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
11845	24207		1.88	4.0E-55	BF303941.1	EST_HUMAN	601886575F2 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4120338 5'
6710	19304	32108	0.83	3.0E-55	AA077156.1	EST_HUMAN	7B09A09 Chromosome 7 Fetal Brain cDNA Library Homo sapiens cDNA clone 7B09A09
10224	22719	35709	0.48	3.0E-55	AF005273.1	NT	Sus scrofa domestica submandibular apomucin mRNA, complete cds
11780	24167		6.76	3.0E-55	BE178519.1	EST_HUMAN	PM1-HT0603-090300-001-g08 HT0603 Homo sapiens cDNA
12563	24663		1.93	3.0E-55	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
400	13044	25535	2.16	2.0E-55	X57147.1	NT	Human endogenous retrovirus pHE.1 (ERV9)
577	13207		2.15	2.0E-55	M10876.1	NT	Human endogenous retroviral DNA (4-1), complete retroviral segment
677	13301	25783	3.11	2.0E-55	4507296	NT	Homo sapiens syntaxin-binding protein 1 (STXBP1) mRNA, and translated products
2986	15602	28082	0.93	2.0E-55	4507798	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A) mRNA
4888	17463	29817	2.37	2.0E-55	BE179286.1	EST_HUMAN	CM1-HT0876-150800-357-g03 HT0876 Homo sapiens cDNA
7515	24785	32902	0.67	2.0E-55	AW501988.1	EST_HUMAN	U1HF-BN0-aks-f06-0-U1.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078275 5'
8995	21533	34462	0.46	2.0E-55	BF224452.1	EST_HUMAN	hr76h08.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3134463 3'
8995	21533	34463	0.46	2.0E-55	BF224452.1	EST_HUMAN	hr76h08.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3134463 3'
9087	21623		3.77	2.0E-55	AI002836.1	EST_HUMAN	amr8h05.s1 Stragene schizo brain S11 Homo sapiens cDNA clone IMAGE:1684185 3' similar to contains THR.b2 THR repetitive element;
9185	21700		0.7	2.0E-55	BE007959.1	EST_HUMAN	QV0-BN0147-280400-213-g06 BN0147 Homo sapiens cDNA
10144	22639	35629	0.47	2.0E-55	AI439401.1	EST_HUMAN	Q30h08.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2140479 3'
10828	23349	36365	2.22	2.0E-55	AU119344	EST_HUMAN	AU119344 HEMBA1 Homo sapiens cDNA clone HEMBA1005583 5'
100	12776	25258	1.25	1.0E-55	4505060	NT	Homo sapiens mannose-6-phosphate receptor (cation dependent) (M6PR) mRNA
203	12864	25348	84.41	1.0E-55	U09823.1	NT	Oryctolagus cuniculus New Zealand white elongation factor 1 alpha (Rabelfaz2) mRNA, complete cds
600	13229	25702	0.98	1.0E-55	AI026718.1	EST_HUMAN	ov65g09.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1644180 3'

Table 4

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1189	13780	26301	6.18	1.0E-55	AB020710.1	NT	Homo sapiens mRNA for KIAA0903 protein, partial cds
1993	14575	27134	1.21	1.0E-55	BE277861.1	EST_HUMAN	601120116F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2987027 5'
1993	14575	27135	1.21	1.0E-55	BE277861.1	EST_HUMAN	601120116F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2987027 5'
2363	14934		2.58	1.0E-55	5803174	NT	Homo sapiens SMA3 (SMA3), mRNA
2378	15099	27519	1.04	1.0E-55	AF000990.1	NT	Homo sapiens testis-specific Testis Transcript Y 1 (TTY1) mRNA, partial cds
2558	15122	27691	10.31	1.0E-55	X13111.1	NT	Human mRNA for HLA-A*11E, a MHC class I molecule (major histocompatibility complex)
2590	15152	27718	4.82	1.0E-55	AB007866.2	NT	Homo sapiens mRNA for KIAA0406 protein, partial cds
2590	15152	27719	4.82	1.0E-55	AB007866.2	NT	Homo sapiens mRNA for KIAA0406 protein, partial cds
2642	15201	27774	1.88	1.0E-55	L54057.1	NT	Homo sapiens CLP mRNA, partial cds
4081	16658	29120	4.09	1.0E-55	AL163267.2	NT	Homo sapiens chromosome 21 segment HS21C087
4382	16969	29417	1.24	1.0E-55	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
4837	17415		1.17	1.0E-55	N77261.1	EST_HUMAN	y44g03.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:245620 5'
4954	17529	29670	1.81	1.0E-55	AB037163.1	NT	Homo sapiens DSCR5b mRNA, complete cds
4954	17529	29671	1.81	1.0E-55	AB037163.1	NT	Homo sapiens DSCR5b mRNA, complete cds
5311	17873	30295	1.03	1.0E-55	8923125	NT	Homo sapiens hypothetical protein FLJ20126 (FLJ20126), mRNA
5689	18315	30814	8.13	1.0E-55	AF119856.1	NT	Homo sapiens PRO1851 mRNA, complete cds
8417	19020	31804	7.22	1.0E-55	11433046	NT	Homo sapiens hect domain and RLD 2 (HERC2), mRNA
8417	19020	31805	7.22	1.0E-55	11433046	NT	Homo sapiens hect domain and RLD 2 (HERC2), mRNA
7930	20472	33381	2.11	1.0E-55	11432994	NT	Homo sapiens discs, large (Drosophila) homolog 2 (chapsyn-110) (DLG2), mRNA
7930	20472	33382	2.11	1.0E-55	11432994	NT	Homo sapiens discs, large (Drosophila) homolog 2 (chapsyn-110) (DLG2), mRNA
8026	20568	33471	0.97	1.0E-55	AF224492.1	NT	Homo sapiens phospholipid scramblase 1 gene, complete cds
8026	20568	33472	0.97	1.0E-55	AF224492.1	NT	Homo sapiens phospholipid scramblase 1 gene, complete cds
10791	23314	36322	4.95	1.0E-55	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
10791	23314	36323	4.95	1.0E-55	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
11322	23020	36029	2.23	1.0E-55	U50950.1	NT	Human infant brain unknown product mRNA, complete cds
11342	23040	36049	1.68	1.0E-55	T10045.1	EST_HUMAN	seq1575 b4HB3MA Cc18-HAP-F1 Homo sapiens cDNA clone b4HB3MA-COT8-HAP-F161 5' similar to similar
11448	23998	36964	1.81	1.0E-55	10587821	NT	to Chinese Hamster DHFR-complified protein mRNA
7401	19926	32791	1.97	9.0E-56	BE376074.1	EST_HUMAN	Homo sapiens DNA-binding protein (LOC36242), mRNA
2761	15316	27882	3.95	7.0E-56	H19934.1	EST_HUMAN	601237702F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3609552 5'
7836	20148	33031	2.11	7.0E-56	AW361213.1	EST_HUMAN	y62g03.r1 Soares adult brain N2b5HB55Y Homo sapiens cDNA clone IMAGE:173044 5' similar to contains
7836	20148	33032	2.11	7.0E-56	AW361213.1	EST_HUMAN	THR repetitive element
1730	14321	26863	1.59	5.0E-56	AW997712.1	EST_HUMAN	RC1-CT0252-231099-013-b07 CT0252 Homo sapiens cDNA
							RC1-CT0252-231099-013-b07 CT0252 Homo sapiens cDNA
							RC3-BND053-170200-011-h01 BN0053 Homo sapiens cDNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9088	21624	34559	0.8	5.0E-56	AW015507.1	EST_HUMAN	UI-H-B10p-aau-a-05-0-U1.s1 NCI_CGAP_Sub2 Homo sapiens cDNA clone IMAGE:2710544 3'
10289	22784		1.35	5.0E-56	W28189.1	EST_HUMAN	43c5 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
12020	25048	30509	3.74	5.0E-56	H55096.1	EST_HUMAN	CHR220038 Chromosome 22 exon Homo sapiens cDNA clone C22_55 5'
30	12709	25168	22.23	4.0E-56	AF141349.1	NT	Homo sapiens beta-tubulin mRNA, complete cds
30	12709	25167	22.23	4.0E-56	AF141349.1	NT	Homo sapiens beta-tubulin mRNA, complete cds
2733	15288	27855	7.6	4.0E-56	4507728	NT	Homo sapiens tubulin, beta polypeptide (TUBB) mRNA
2733	15288	27856	7.6	4.0E-56	4507728	NT	Homo sapiens tubulin, beta polypeptide (TUBB) mRNA
2838	13183	25661	3.4	4.0E-56	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
6405	18008	31789	5.85	4.0E-56	AF217508.1	NT	Homo sapiens uncharacterized bone marrow protein BM031 mRNA, complete cds
6405	18008	31790	5.85	4.0E-56	AF217508.1	NT	Homo sapiens uncharacterized bone marrow protein BM031 mRNA, complete cds
10400	22894	35889	1.2	4.0E-56	AF043348.1	NT	Homo sapiens lymphocyte-specific protein 1 (LSP1) gene, LSP1-7 allele, partial cds
10803	23326	36335	8.31	4.0E-56	AI498086.1	EST_HUMAN	tm85g12.x1 NCI_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2163048 3'
10803	23328	36336	8.31	4.0E-56	AI498086.1	EST_HUMAN	tm85g12.x1 NCI_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2163048 3'
1386	13980	26507	2.12	3.0E-56	8924029	NT	Homo sapiens hypothetical protein PRO1304 (PRO1304), mRNA
1801	14391	26936	4.33	3.0E-56	8912743	NT	Homo sapiens 5'-3' exonuclease 2 (XRN2), mRNA
3159	15773	28240	1.88	3.0E-56	AA325826.1	EST_HUMAN	EST28989 Cerebellum II Homo sapiens cDNA 5' end
3159	15773	28241	1.88	3.0E-56	AA325826.1	EST_HUMAN	EST28989 Cerebellum II Homo sapiens cDNA 5' end
3903	16502		2.38	3.0E-56	AF055066.1	NT	Homo sapiens MHC class 1 region
3991	16589	28061	0.9	3.0E-56	BE393512.1	EST_HUMAN	601310203F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3831848 5'
4477	17082	28512	0.62	3.0E-56	7657042	NT	Homo sapiens Down syndrome candidate region 1 (DSER1), mRNA
4515	17099	29546	5.15	3.0E-56	AL163266.2	NT	Homo sapiens chromosome 21 segment HS21C088
4873	17255	29707	2.57	3.0E-56	5902085	NT	Homo sapiens superkiller viral-like activity 2 (S. cerevisiae homolog)-like (SKIV2L), mRNA
4925	17500		1.14	3.0E-56	BE883572.1	EST_HUMAN	601438154F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3923100 5'
5280	17842	30269	0.6	3.0E-56	6912593	NT	Homo sapiens phosphatidylinositol transfer protein, beta (PITPNB), mRNA
5348	17842	30269	0.59	3.0E-56	6912593	NT	Homo sapiens phosphatidylinositol transfer protein, beta (PITPNB), mRNA
5863	18485	31208	1.4	3.0E-56	4759163	NT	Homo sapiens sparc/osteonectin, cwcw and kazal-like domains proteoglycan (testican) (SPOCK) mRNA
5863	18485	31209	1.4	3.0E-56	4759163	NT	Homo sapiens sparc/osteonectin, cwcw and kazal-like domains proteoglycan (testican) (SPOCK) mRNA
6956	19533	32358	6.22	3.0E-56	11421124	NT	Homo sapiens lysosomal-associated membrane protein 2 (LAMP2), mRNA
8750	21289	34209	5.2	3.0E-56	11418704	NT	Homo sapiens bone morphogenetic protein 5 (BMP5), mRNA
9727	22225	35202	0.86	3.0E-56	D63479.2	NT	Homo sapiens mRNA for KIAA0145 protein, partial cds
10375	22869	35862	1.63	3.0E-56	11434956	NT	Homo sapiens KIAA0317 gene product (KIAA0317), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11194	23699	36749	6.31	3.0E-56	5902013	NT	Homo sapiens nuclear pore complex interacting protein (NPIP), mRNA
11194	23699	36750	6.31	3.0E-56	5902013	NT	Homo sapiens nuclear pore complex interacting protein (NPIP), mRNA
11883	24230	31002	1.3	3.0E-56	11434876	NT	Homo sapiens caveolin 3 (CAV3), mRNA
11883	24230	31003	1.3	3.0E-56	11434876	NT	Homo sapiens caveolin 3 (CAV3), mRNA
550	13181		2.35	2.0E-56	AA199818.1	EST_HUMAN	zq52a08.s1 Striatogene neurospindelium (#837231) Homo sapiens cDNA clone IMAGE:645206 3'
762	15424	25878	1.37	2.0E-56	BE064386.1	EST_HUMAN	RC4-BT0310-110300-015-f10 BT0310 Homo sapiens cDNA
762	15424	25879	1.37	2.0E-56	BE064386.1	EST_HUMAN	RC4-BT0310-110300-015-f10 BT0310 Homo sapiens cDNA
2426	14994	27567	1.32	2.0E-56	M26061.1	NT	Human cGMP phosphodiesterase alpha subunit (CGPR-A) mRNA, complete cds
2426	14994	27568	1.32	2.0E-56	M26061.1	NT	Human cGMP phosphodiesterase alpha subunit (CGPR-A) mRNA, complete cds
3017	15633	28110	1.33	2.0E-56	AB037835.1	NT	Homo sapiens mRNA for KIAA1414 protein, partial cds
3358	15966		1.2	2.0E-56	AB009681.1	NT	Homo sapiens gene for activin receptor type IIB, complete cds
3566	16190	28674	1.34	2.0E-56	AV703184.1	EST_HUMAN	AV703184 ADB Homo sapiens cDNA clone ADBCFG10 5'
7147	19680	32521	1.9	2.0E-56	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
1016	13626		12.77	1.0E-56	AF190930.1	NT	Macaca fascicularis protein tyrosine phosphatase (PRL-1) mRNA, complete cds
3737	16338	28803	1.67	1.0E-56	AW589833.1	EST_HUMAN	hg23c11.x1 NCL CGAP_GC8 Homo sapiens cDNA clone IMAGE:2946452 3'
3737	16338	28804	1.67	1.0E-56	AW589833.1	EST_HUMAN	hg23c11.x1 NCL CGAP_GC8 Homo sapiens cDNA clone IMAGE:2946452 3'
9866	22363		0.71	1.0E-56	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
9861	22458	35439	1.57	1.0E-56	AW845987.1	EST_HUMAN	RC2-CT0183-220998-001-E02 CT0183 Homo sapiens cDNA
853	13276		1.74	9.0E-57	AW880865.1	EST_HUMAN	QV0-OT0033-070300-152-h03 OT0033 Homo sapiens cDNA
11099	23609	36849	1.92	9.0E-57	AF228497.1	NT	Homo sapiens serine protease 17 (KLK4) gene, complete cds
11099	23609	36650	1.92	9.0E-57	AF228497.1	NT	Homo sapiens serine protease 17 (KLK4) gene, complete cds
11387	23849	36915	2.01	9.0E-57	AB020981.1	NT	Homo sapiens mRNA for cyclin B2, complete cds
15	12684	25150	0.98	8.0E-57	8923349	NT	Homo sapiens hypothetical protein FLJ20371 (FLJ20371), mRNA
319	12973	25492	2.71	8.0E-57	AW816405.1	EST_HUMAN	QV4-ST0234-181199-037-R05 ST0234 Homo sapiens cDNA
917	13530	26048	8.64	8.0E-57	AW264599.1	EST_HUMAN	xt05d10.x1 NCL CGAP_Bm53 Homo sapiens cDNA clone IMAGE:2759251 3' similar to gb:U05875
1852	14440	26997	1.52	8.0E-57	AA496109.1	EST_HUMAN	INTERFERON-GAMMA RECEPTOR BETA CHAIN PRECURSOR (HUMAN);
3428	16036	28516	1	8.0E-57	4758279	NT	z51b12.11 Soares_teslis_NHT Homo sapiens cDNA clone IMAGE:757151 5'
3428	16036	28517	1	8.0E-57	4758279	NT	Homo sapiens EphA4 (EPHA4) mRNA
5187	17752	30183	0.6	8.0E-57	BE298916.1	EST_HUMAN	Homo sapiens EphA4 (EPHA4) mRNA
5450	24958	30631	3.17	8.0E-57	11418185	NT	600944440F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2960864 5'
6590	19187	31989	12.5	8.0E-57	AB023177.1	NT	Homo sapiens aconitase 2, mitochondrial (ACO2), mRNA
6590	19187	31990	12.5	8.0E-57	AB023177.1	NT	Homo sapiens mRNA for KIAA0960 protein, partial cds
7728	20237	33128	2.72	8.0E-57	AB020644.1	NT	Homo sapiens mRNA for KIAA0837 protein, partial cds



Table 4

### Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7729	20237	33129	2.72	8.0E-57	AB020844.1	NT	Homo sapiens mRNA for KIAA0837 protein, partial cds
11351	12694	25150	3.59	8.0E-57	8823349	NT	Homo sapiens hypothetical protein FLJ20371 (FLJ20371), mRNA
12271	24477	30936	1.41	8.0E-57	11545732	NT	Homo sapiens SH3-domain binding protein 1 (SH3BP1), mRNA
1261	13858	26375	1.16	7.0E-57	AJ003100.1	NT	Homo sapiens GYS2 gene, exon 14
3287	15898	28378	1.08	7.0E-57	7242158	NT	Homo sapiens NME7 (NME7), mRNA
3287	15898	28377	1.08	7.0E-57	7242158	NT	Homo sapiens NME7 (NME7), mRNA
3309	15920	28397	1	7.0E-57	6005979	NT	Homo sapiens Kruppel-like factor 8 (KLFB), mRNA
3948	19544	29011	2.3	7.0E-57	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (pi4K230) mRNA, complete cds
3948	19544	29012	2.3	7.0E-57	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (pi4K230) mRNA, complete cds
4524	17108		1.06	7.0E-57	AF020503.1	NT	Homo sapiens FRA3B common fragile region, diadenosine triphosphate hydrolase (FHT) gene, exon 5
12634	24992		5.12	5.0E-57	AJ21735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
3817	16417	28880	1.68	4.0E-57	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
837	13453	25963	1.03	3.0E-57	4507798	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A) mRNA
1376	13989		39.52	3.0E-57	AA230278.1	EST_HUMAN	nc1307 s1 NCI CGAP_P1 Homo sapiens cDNA clone IMAGE:1008037 similar to SW:RS10_HUMAN
2434	15001	27573	1.01	3.0E-57	AA348335.1	EST_HUMAN	P48783 40S RIBOSOMAL PROTEIN S10 ; EST54770 Hippocampus II Homo sapiens cDNA 5' end
2727	15282	27849	0.93	3.0E-57	BE676822.1	EST_HUMAN	7f33b10.x1 NCI CGAP_CLL1 Homo sapiens cDNA clone IMAGE:3286443 3' similar to WP:Y47H9C.2 CE20263 ;
2727	15282	27850	0.93	3.0E-57	BE676822.1	EST_HUMAN	7f33b10.x1 NCI CGAP_CLL1 Homo sapiens cDNA clone IMAGE:3286443 3' similar to WP:Y47H9C.2 CE20263 ;
3618	18221	28699	0.93	3.0E-57	AF232708.1	NT	Homo sapiens cell-line tsA201a chloride ion current inducer protein [(Cin) gene, complete cds
3760	16361		60.31	3.0E-57	AW853984.1	EST_HUMAN	RC3-C10254-110300-027-d10 C10254 Homo sapiens cDNA
6180	18780	31559	1.34	3.0E-57	11225608	NT	Homo sapiens angiotensin I converting enzyme (peptidyl-dipeptidase A) 2 (ACE2), mRNA
6272	19880	31648	3.17	3.0E-57	BE796537.1	EST_HUMAN	601589896F1 NIH_MGC 7 Homo sapiens cDNA clone IMAGE:3944302 5'
8087	20828	33542	3.09	3.0E-57	W28130.1	EST_HUMAN	42f6 Homo sapiens relina cDNA randomly primed sublibrary Homo sapiens cDNA
8111	20852	33560	2.27	3.0E-57	11545798	NT	Homo sapiens hypothetical protein FLJ11658 (FLJ11658), mRNA
8111	20852	33561	2.27	3.0E-57	11545798	NT	Homo sapiens hypothetical protein FLJ11658 (FLJ11658), mRNA
8223	20764	33981	0.61	3.0E-57	11427757	NT	Homo sapiens KIAA0649 gene product (KIAA0649), mRNA
8368	20908	33927	1.18	3.0E-57	J05262.1	NT	Human farnesyl pyrophosphate synthetase mRNA, complete cds
8792	21331	34255	4.05	3.0E-57	AU117659.1	EST_HUMAN	AU117659 HEMBA1 Homo sapiens cDNA clone HEMBA1001910 5'
8174	21751	34986	0.63	3.0E-57	11545768	NT	Homo sapiens hypothetical protein FLJ11659 (FLJ11659), mRNA

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9174	21751	34697	0.63	3.0E-57	11545798	NT	Homo sapiens hypothetical protein FLJ11658 (FLJ11658), mRNA
10787	23311	36318	3.02	3.0E-57	AW248374.1	EST_HUMAN	2820473.3 prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2820473 5'
11890	25068	30513	7.99	3.0E-57	W23871.1	EST_HUMAN	zb45d11.1 Soares_Tetralung_NbHL19W Homo sapiens cDNA clone IMAGE:306549 5'
12272	24962		1.69	3.0E-57	AW178575.1	EST_HUMAN	RCO-HT0112-080999-001-C08 HT0112 Homo sapiens cDNA
1480	14073	26612	0.88	2.0E-57	AI478904.1	EST_HUMAN	Im25c10.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2157618 3' similar to contains Alu repetitive element
1548	14140	26673	0.96	2.0E-57	AF246219.1	NT	Homo sapiens SNARE protein kinase SNAK mRNA, complete cds
1548	14140	26674	0.96	2.0E-57	AF246219.1	NT	Homo sapiens SNARE protein kinase SNAK mRNA, complete cds
2444	15011	27583	1.15	2.0E-57	BE172526.1	EST_HUMAN	MRQ-HT0559-010400-009-h10 HT0559 Homo sapiens cDNA
2758	15311	27877	4.79	2.0E-57	AA845419.1	EST_HUMAN	ak02b02.s1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1404747 3' similar to contains Alu repetitive element; contains element MER22 repetitive element
3486	16091		2.28	2.0E-57	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
3605	16209	28688	0.71	2.0E-57	R07702.1	EST_HUMAN	ye98h01.1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:125809 5'
3605	16209	28689	0.71	2.0E-57	R07702.1	EST_HUMAN	ye98h01.1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:125809 5'
4004	16602	29076	0.82	2.0E-57	BE073284.1	EST_HUMAN	MRQ-BT0551-060300-103-b03 BT0551 Homo sapiens cDNA
4608	17191	29637	8.02	2.0E-57	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
5849	18473		1.57	2.0E-57	AA016131.1	EST_HUMAN	ze31c05.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:360584 5' similar to contains L1.L3 L1 repetitive element
6184	18784		29.73	2.0E-57	BF115286.1	EST_HUMAN	7n80f04.x1 NCL_CGAP_Ov18 Homo sapiens cDNA clone IMAGE:3570966 3' similar to contains TAR1.11 MER22 repetitive element
6307	18914	31688	0.73	2.0E-57	11431281	NT	Homo sapiens small inducible cytokine subfamily A (Cys-Cys), member 22 (SCYA22), mRNA
8568	21105	34024	1.22	2.0E-57	AF045452.1	NT	Homo sapiens cell-line KG1 transcriptional regulatory protein p54 mRNA, complete cds
9760	22258	35241	2.55	2.0E-57	AF057722.1	NT	Homo sapiens 17-beta-hydroxysteroid dehydrogenase IV (HSD17B4) gene, exons 3 and 4
11150	23658	36701	2.05	2.0E-57	11424084	NT	Homo sapiens hypothetical protein FLJ20041 (FLJ20041), mRNA
11150	23658	36702	2.05	2.0E-57	11424084	NT	Homo sapiens hypothetical protein FLJ20041 (FLJ20041), mRNA
11192	23697	36746	1.84	2.0E-57	AJ245503.1	NT	Homo sapiens partial mRNA for PEX5 related protein
11192	23697	36747	1.84	2.0E-57	AJ245503.1	NT	Homo sapiens partial mRNA for PEX5 related protein
8626	21165		3.5	1.0E-57	BE043031.1	EST_HUMAN	hc32a08.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3039062 3' similar to TR:O00246 O00246 HYPOTHETICAL 9.3 KD PROTEIN
12049	24333		6.35	1.0E-57	AW470791.1	EST_HUMAN	hc33d08.x1 NCL_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2875499 3' similar to contains THR.b3 THR repetitive element
5857	18480	31203	1.02	9.0E-58	AA297847.1	EST_HUMAN	EST11348 Uterus Homo sapiens cDNA 5' end
12335	24518	30922	2.62	9.0E-58	BE395081.1	EST_HUMAN	601309465F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3631000 5'
615	13242		3.87	8.0E-58	BE868715.1	EST_HUMAN	601445948F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3850211 5'

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
682	13306	25789	3.77	8.0E-58	A1798378.1	EST_HUMAN	t34b07.x1 NCI_CGAP_OV23 Homo sapiens cDNA clone IMAGE:2220181 3' similar to TR:O15475 O15475 UNNAMED HERV-H PROTEIN :
682	13306	25780	3.77	8.0E-58	A1798378.1	EST_HUMAN	t34b07.x1 NCI_CGAP_OV23 Homo sapiens cDNA clone IMAGE:2220181 3' similar to TR:O15475 O15475 UNNAMED HERV-H PROTEIN :
1897	14482	27041	2.82	8.0E-58	11434821	NT	Homo sapiens putative protein O-mannosyltransferase (POMT2), mRNA
1897	14482	27042	2.82	8.0E-58	11434821	NT	Homo sapiens putative protein O-mannosyltransferase (POMT2), mRNA
3003	15619		2.84	8.0E-58	7706132	NT	Homo sapiens DHHC1 protein (LOC51304), mRNA
10735	23260		6.42	7.0E-58	5174542	NT	Homo sapiens MADS box transcription enhancer factor 2, polypeptide B (myocyte enhancer factor 2B) (MEF2B) mRNA
10809	23332	36344	3.77	7.0E-58	AW504109.1	EST_HUMAN	U1-HF-BND-ali-g-10-Q-U1.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3079887 5'
10809	23332	36345	3.77	7.0E-58	AW504109.1	EST_HUMAN	U1-HF-BND-ali-g-10-Q-U1.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3079887 5'
2414	14982	27558	3.39	6.0E-58	AU130689.1	EST_HUMAN	AU130688 NT2RP3 Homo sapiens cDNA clone NT2RP3001 283 5'
2926	15542	28017	1.26	6.0E-58	BE242150.1	EST_HUMAN	TCAAPE1219 Pediatric acute myelogenous leukemia cell (FAB M1) Bayor-HGSC project=TCAA Homo sapiens cDNA clone TCAAPE1219
2926	15542	28018	1.26	6.0E-58	BE242150.1	EST_HUMAN	TCAAPE1219 Pediatric acute myelogenous leukemia cell (FAB M1) Bayor-HGSC project=TCAA Homo sapiens cDNA clone TCAAPE1219
6318	18925	31702	1.15	6.0E-58	AF106911.1	NT	Homo sapiens chemokine MIP-2 gamma (MIP-2 gamma) mRNA, complete cds
10211	22706	35700	0.99	8.0E-58	11434748	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type 21 (PTPN21), mRNA
12150	24393		1.87	6.0E-58	11526291	NT	Homo sapiens hypothetical protein FLJ20454 (FLJ20454), mRNA
322	12876	25464	3.26	5.0E-58	4507334	NT	Homo sapiens synaptidjanin 1 (SYNJ1), mRNA
739	13359	25853	5.81	5.0E-58	BE763084.1	EST_HUMAN	RC4-NT0057-160600-016-b05 NT0057 Homo sapiens cDNA
1236	13835	26350	3.59	5.0E-58	AW797948.1	EST_HUMAN	CM3-UM0043-240300-127-e07 UM0043 Homo sapiens cDNA
1236	13835	26351	3.59	5.0E-58	AW797948.1	EST_HUMAN	CM3-UM0043-240300-127-e07 UM0043 Homo sapiens cDNA
1237	13835	26350	2.7	5.0E-58	AW797948.1	EST_HUMAN	CM3-UM0043-240300-127-e07 UM0043 Homo sapiens cDNA
1237	13835	26351	2.7	5.0E-58	AW797948.1	EST_HUMAN	CM3-UM0043-240300-127-e07 UM0043 Homo sapiens cDNA
3365	15973	28450	4.17	5.0E-58	AA988183.1	EST_HUMAN	orf8e07.s1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1603908 3'
4345	16932	28973	0.78	5.0E-58	A1638745.1	EST_HUMAN	ts89607.x1 NCI_CGAP_GC8 Homo sapiens cDNA clone IMAGE:2238468 3' similar to SW:PRO2_ACACA P19984 PROFILIN II :
5105	17677		1.12	5.0E-58	AW848834.1	EST_HUMAN	IL3-CT0214-090300-081-F06 CT0214 Homo sapiens cDNA
5911	18435		2.08	5.0E-58	11496282	NT	Homo sapiens placenta-specific 1 (PLAC1), mRNA
6528	18931	31707	5.73	5.0E-58	H23072.1	EST_HUMAN	Ym51h07.r1 Soerres Infant brain INIB Homo sapiens cDNA clone IMAGE:52071 5'
6528	19128	31922	0.87	5.0E-58	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
6597	19194	31999	1.24	5.0E-58	11421330	NT	Homo sapiens apical protein, Xenopus laevis-like (APXL), mRNA
7161	19693	32539	0.72	5.0E-58	4885400	NT	Homo sapiens holochochrome c synthase (cytochrome c heme-lyase) (HCCS) mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7910	20452	33359	9.67	5.0E-58	8922693	NT	Homo sapiens hypothetical protein FLJ10826 (FLJ10826), mRNA
8294	20835	33757	0.74	5.0E-58	AB046837.1	NT	Homo sapiens mRNA for KIAA1617 protein, partial cds
9263	21789	34739	0.72	5.0E-58	5231227	NT	Homo sapiens ribonuclease 6 precursor (RNASE6PL), mRNA
9263	21789	34740	0.72	5.0E-58	5231227	NT	Homo sapiens ribonuclease 6 precursor (RNASE6PL), mRNA
9771	22269	35253	0.74	5.0E-58	11430647	NT	Homo sapiens pre-mRNA splicing factor similar to S. cerevisiae Prp18 (PRP18), mRNA
10030	22525	35521	1.39	5.0E-58	AL163218.2	NT	Homo sapiens chromosome 21 segment HS21C018
10300	22784	35784	0.59	5.0E-58	AB014511.1	NT	Homo sapiens mRNA for KIAA0611 protein, partial cds
10300	22784	35785	0.59	5.0E-58	AB014511.1	NT	Homo sapiens mRNA for KIAA0611 protein, partial cds
11859	24987		6.17	5.0E-58	11526293	NT	Homo sapiens cat eye syndrome chromosome region, candidate 1 (CECR1), mRNA
12331	25016		1.81	5.0E-58	11426423	NT	Homo sapiens acetyl-Coenzyme A carboxylase alpha (ACACA), mRNA
12577	24673		1.34	5.0E-58	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
12653	24725	30853	1.37	5.0E-58	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
12653	24725	30854	1.37	5.0E-58	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
396	13042	25532	5.55	4.0E-58	4502302	NT	Homo sapiens ATP synthase, H <sup>+</sup> transporting, mitochondrial F1 complex, O subunit (oligomycin sensitivity conferring protein) (ATP5O), mRNA
829	13446	25953	1.76	4.0E-58	4504634	NT	Homo sapiens interleukin 10 receptor, beta (IL10RB), mRNA
1517	14109	26645	1.88	4.0E-58	4503648	NT	Homo sapiens coagulation factor IX (plasma thromboplastic component, Christmas disease, hemophilia B) (F9), mRNA
2611	15173	27741	1.13	4.0E-58	AF265555.1	NT	Homo sapiens ubiquitin-conjugating BIR-domain enzyme APOLLON mRNA, complete cds
2660	15219	27790	1.75	4.0E-58	U36251.1	NT	Human beta-prime-adaptin (BAM22) gene, exon 3
3367	15975	28452	1.62	4.0E-58	D16470.1	NT	Human mRNA, Xq terminal portion
3803	16403	28867	1.26	4.0E-58	5031660	NT	Homo sapiens EGF-like repeats and discoidin I-like domains 3 (EDIL3), mRNA
11221	23724	36779	9.32	4.0E-58	11424059	NT	Homo sapiens E1B-55kDa-associated protein 5 (E1B-AP5), mRNA
357	13006		1.77	3.0E-58	R17879.1	EST_HUMAN	Yg10e02.r1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:31693 5'
1433	14026	26554	2.23	3.0E-58	4759881	NT	Homo sapiens peptide YY (PYY), mRNA
3059	15675		0.73	3.0E-58	R17879.1	EST_HUMAN	Yg10e02.r1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:31693 5'
3212	15824	28300	3.1	3.0E-58	BF569948.1	EST_HUMAN	602185789F1 NIH_MGC_45 Homo sapiens cDNA clone IMAGE:4309943 5'
3212	15824	28301	3.1	3.0E-58	BF569948.1	EST_HUMAN	602185789F1 NIH_MGC_45 Homo sapiens cDNA clone IMAGE:4309943 5'
6407	19010	31792	0.72	3.0E-58	BE069509.1	EST_HUMAN	QV0-BT0702-170400-194409 BT0702 Homo sapiens cDNA
6572	19170	31967	0.98	3.0E-58	F07056.1	EST_HUMAN	HSC1T0081 normalized infant brain cDNA Homo sapiens cDNA clone c-1g08
6751	19344	32151	1.25	3.0E-58	AV712977.1	EST_HUMAN	AV712977 DCA Homo sapiens cDNA clone DCAAZG04 5'
976	13588	26103	8.92	2.0E-58	AF068624.1	NT	Homo sapiens 5-aminolevulinate synthase 2 (ALAS2) gene, complete cds

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1333	13927		30.8	2.0E-58	BE208532.1	EST_HUMAN	ba08b07.y1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2823733 5' similar to gb:X89391.60S RIBOSOMAL PROTEIN L6 (HUMAN); gb:X81987 M.musculus mRNA for TAX responsive element binding protein (MOUSE);
5539	18171	30586	0.75	2.0E-58	AW074831.1	EST_HUMAN	xa08a09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2567704 3'
5560	24745	30607	4.01	2.0E-58	BE907186.1	EST_HUMAN	601499961F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3901911 5'
5560	24745	30637	4.01	2.0E-58	BE907186.1	EST_HUMAN	601499961F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3901911 5'
6207	18817	31588	1.26	2.0E-58	BF513488.1	EST_HUMAN	UJ-H-BW1-ams-g-11-0-JL s1 NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3071060 3'
							em57e02.x1 Johnston frontal cortex Homo sapiens cDNA clone IMAGE:1539674 3' similar to WP:ZK328.1 CE05065 UBIQUITIN CONJUGATING ENZYME; RECOVERIN SUBFAMILY OF EF-HAND CALCIUM BINDING PROTEIN;
6270	18878	31648	2.1	2.0E-58	AI124874.1	EST_HUMAN	Yq08h06.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:196379 5'
6302	18909	31681	0.88	2.0E-58	R92587.1	EST_HUMAN	qm84c01.x1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1895424 3'
7006	19504	32323	1	2.0E-58	AI291407.1	EST_HUMAN	Homo sapiens endocytic receptor Endo180 (ENDO180) mRNA, complete cds
7210	18741	32594	2.91	2.0E-58	AF134838.1	NT	Homo sapiens endocytic receptor Endo180 (ENDO180) mRNA, complete cds
7210	18741	32595	2.91	2.0E-58	AF134838.1	NT	Homo sapiens endocytic receptor Endo180 (ENDO180) mRNA, complete cds
10620	23152	36164	18.73	2.0E-58	BF307745.1	EST_HUMAN	601890812F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4131891 5'
10844	23365	36381	2.67	2.0E-58	AW872841.1	EST_HUMAN	hm25f08.x1 NCI_CGAP_Thy4 Homo sapiens cDNA clone IMAGE:3013671 3'
751	13371	25865	4.83	1.0E-58	M65134.1	NT	Human complement component C5 mRNA, 3'end
1106	13710	26219	5.91	1.0E-58	6274549	NT	Homo sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 9 (22kD, B22) (NDUFB9), mRNA
1372	13866	26492	1.24	1.0E-58	AW957182.1	EST_HUMAN	EST369252 IMAGE resequences, MAGD Homo sapiens cDNA
1372	13866	26493	1.24	1.0E-58	AW957182.1	EST_HUMAN	EST369252 IMAGE resequences, MAGD Homo sapiens cDNA
1440	14033	26561	2.04	1.0E-58	AJ238093.1	NT	Homo sapiens partial AF-4 gene, exons 2 to 7 and Alu repeat elements
1704	14297	26634	0.9	1.0E-58	BE466132.1	EST_HUMAN	hy10f08.x1 NCI_CGAP_GC8 Homo sapiens cDNA clone IMAGE:3196935 3'
2826	15380	27950	1.17	1.0E-58	4759169	NT	Homo sapiens sterol regulatory element binding transcription factor 2 (SREBF2) mRNA
3590	16194	28679	0.62	1.0E-58	4758081	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (versican) (CSPG2) mRNA
3590	16194	28680	0.62	1.0E-58	4758081	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (versican) (CSPG2) mRNA
3783	16383	28848	0.57	1.0E-58	4507628	NT	Homo sapiens transition protein 1 (during histone to protamine replacement) (TNF1) mRNA
5106	17676	30117	6.64	1.0E-58	AI141063.1	EST_HUMAN	oz43h01.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1678128 3'
6007	18627	31382	1.2	1.0E-58	BE061860.1	EST_HUMAN	RC1-BT0254-290100-015-e01 BT0254 Homo sapiens cDNA
6946	19523	32345	0.73	1.0E-58	11422031	NT	Homo sapiens hypothetical protein (LOC51280), mRNA
8603	21342	34268	0.7	1.0E-58	4505314	NT	Homo sapiens myomesin (M-protein) 2 (165kD) (MYOM2), mRNA
8912	21450	34371	0.83	1.0E-58	AV751001.1	EST_HUMAN	AV751001 NPC Homo sapiens cDNA clone NPCACH09 5'
9010	21547	34475	0.65	1.0E-58	AA412397.1	EST_HUMAN	z89f05.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:730497 5'
9010	21547	34476	0.65	1.0E-58	AA412397.1	EST_HUMAN	z89f05.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:730497 5'

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10089	22584	35577	0.55	1.0E-58	11432994	NT	Homo sapiens discs, large (Drosophila) homolog 2 (chapsyn-110) (DLG2), mRNA
11610	24053		5.43	1.0E-58	X63392.1	NT	H. sapiens immunoglobulin kappa light chain variable region L14
2273	14847	27423	16.05	8.0E-59	4507378	NT	Homo sapiens TATA box binding protein (TBP) mRNA
8121	20862	33572	2.08	8.0E-59	A1761063.1	EST_HUMAN	wt50406.x1 NCL CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2384171 3'
190	15409		2.18	6.0E-59	BF035327.1	EST_HUMAN	601458531F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862086 5'
8188	20729	33641	0.58	6.0E-59	A1750970.1	EST_HUMAN	cn06h02.y1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBC_cn06h02 random
1790	14380	26924	1.32	5.0E-59	AW157281.1	EST_HUMAN	au63h05.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2783865 3' similar to
1790	14380	26925	1.32	5.0E-59	AW157281.1	EST_HUMAN	TR:O75786 O75786 GANGLIOSIDE-INDUCED DIFFERENTIATION ASSOCIATED PROTEIN 1.1;
3161	15775	28243	7.81	5.0E-59	A1807484.1	EST_HUMAN	au63h05.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2783865 3' similar to
4762	17343	28791	4.42	5.0E-59	X83497.1	NT	TR:O75786 O75786 GANGLIOSIDE-INDUCED DIFFERENTIATION ASSOCIATED PROTEIN 1.1;
5886	18509	31235	0.81	5.0E-59	6005698	NT	wt48c11.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2358836 3'
7064	18083	30440	8.32	5.0E-59	AW162304.1	EST_HUMAN	H. sapiens DNA for ZNF80-linked ERV9 long terminal repeat
8741	21280	34203	1.35	5.0E-59	11421778	NT	Homo sapiens ataxin 2 related protein (A2LP), mRNA
9621	22121	35085	1.85	5.0E-59	AV762869.1	EST_HUMAN	au66c07.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2781228 3' similar to contains
10786	23310	36317	3.47	5.0E-59	11434908	NT	element TAR1 repetitive element ;
826	13443	25951	2.85	4.0E-59	D60006.1	NT	Homo sapiens polymerase (RNA) III (DNA directed) (RPC39), mRNA
5728	18354	31058	1.22	4.0E-59	11034810	NT	AV762869 MDS Homo sapiens cDNA clone MDSEIC12 5'
12004	24917		5.54	4.0E-59	AF057720.1	NT	Homo sapiens hypothetical protein (LOC57143), mRNA
10	12889		4.75	3.0E-59	AW965524.1	EST_HUMAN	Human mRNA for KIAA0184 gene, partial cds
245	12904	25385	3.86	3.0E-59	7662247	NT	Homo sapiens catenin (cadherin-associated protein), delta 2 (neural plakophilin-related arm-repeat protein) (CTNND2), mRNA
1748	14338	26884	8.2	3.0E-59	4505960	NT	Homo sapiens 17-beta-hydroxysteroid dehydrogenase IV (HSD17B4) gene, promoter region and exon 1
1748	14338	26885	8.2	3.0E-59	4505960	NT	EST377582 IMAGE resequences, MAGI Homo sapiens cDNA
2174	14751	27320	7.15	3.0E-59	AB029035.1	NT	Homo sapiens KIAA0680 gene product (KIAA0680), mRNA
2174	14751	27321	7.15	3.0E-59	AB029035.1	NT	Homo sapiens plasminogen activator, tissue (PLATa) mRNA
2798	15477	27920	1.29	3.0E-59	AF232299.1	NT	Homo sapiens plasminogen activator, tissue (PLATa) mRNA
3074	15889	28161	0.77	3.0E-59	T18965.1	EST_HUMAN	Homo sapiens mRNA for KIAA1112 protein, partial cds
3074	15889	28162	0.77	3.0E-59	T18965.1	EST_HUMAN	Homo sapiens mRNA for KIAA1112 protein, partial cds
3163	15777	28247	4.67	3.0E-59	4502014	NT	Homo sapiens NF-1.2 pseudogene, exon 17
							Homo sapiens NF-1.2 pseudogene, exon 17
							h020171 Testis 1 Homo sapiens cDNA clone h02017 5' end
							h020171 Testis 1 Homo sapiens cDNA clone h02017 5' end
							Homo sapiens A kinase (PRKA) anchor protein 1 (AKAP1), mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3163	15777	28248	4.67	3.0E-59	4502014	NT	Homo sapiens A kinase (PRKA) anchor protein 1 (AKAP1), mRNA
3897	16496	28958	1.12	3.0E-59	4508044	NT	Homo sapiens zona pellucida glycoprotein 2 (sperm receptor) (ZP2), mRNA
4798	17374	29828	0.98	3.0E-59	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
4987	17541	29984	1.33	3.0E-59	7427522	NT	Homo sapiens protein tyrosine phosphatase, receptor type, T (PTPRT), mRNA
6369	18973	31751	2.1	3.0E-59	8924074	NT	Homo sapiens hypothetical protein PRO1741 (PRO1741), mRNA
7395	19920	32785	1.87	3.0E-59	5454137	NT	Homo sapiens nuclear receptor co-repressor 1 (NCOR1), mRNA
7872	20414	33321	1.26	3.0E-59	X12556.1	NT	Human mRNA for dbi proto-oncogene
7872	20414	33322	1.26	3.0E-59	X12556.1	NT	Human mRNA for dbi proto-oncogene
9957	22452	35433	1.04	3.0E-59	X70251.1	NT	H. sapiens CKII-alpha gene
9957	22452	35434	1.04	3.0E-59	X70251.1	NT	H. sapiens CKII-alpha gene
11880	24291		1.28	3.0E-59	11417668	NT	Homo sapiens gamma-glutamyltransferase-like activity 1 (GGTLA1), mRNA
12130	24386		9.09	3.0E-59	11417668	NT	Homo sapiens gamma-glutamyltransferase-like activity 1 (GGTLA1), mRNA
6044	18663	31402	0.98	2.0E-59	BF509383.1	EST_HUMAN	UI-H-B14-eyb-b-02-0-J1.s1 NCI_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3086522 3'
6044	18663	31403	0.98	2.0E-59	BF509383.1	EST_HUMAN	UI-H-B14-eyb-b-02-0-J1.s1 NCI_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3086522 3'
9555	22055		5.27	2.0E-59	AA309774.1	EST_HUMAN	EST180633 Jurkat T-cells V Homo sapiens cDNA 5' end
10419	22913		1.34	2.0E-59	BF365554.1	EST_HUMAN	RCO-NT0038-100700-032-a07 NT0036 Homo sapiens cDNA
10710	23238	36252	2.49	2.0E-59	AW410698.1	EST_HUMAN	fh07h04.x1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2861654 5'
10710	23238	36253	2.49	2.0E-59	AW410698.1	EST_HUMAN	fh07h04.x1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2861654 5'
11879	24228	31046	5.76	2.0E-59	AI631809.1	EST_HUMAN	wa38c12.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2300182 3' similar to TR:Q88542
12437	24943	30621	2.88	2.0E-59	L11845.1	NT	Q88542 RTVL-H PROTEIN; contains LTR7.b1 LTR7 repetitive element;
174	12837		18.31	1.0E-59	BE26841.1	EST_HUMAN	Homo sapiens alpha-tubulin mRNA, complete cds
2516	15080	27652	1.02	1.0E-59	AI139341.1	EST_HUMAN	601176757F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3531927 5'
2516	15080	27653	1.02	1.0E-59	AI139341.1	EST_HUMAN	qc21c08.x1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:1710254 3'
						EST_HUMAN	qc21c08.x1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:1710254 3'
						EST_HUMAN	oa56h11.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1309029 3' similar to TR:Q13537
2649	15208		1.45	1.0E-59	AA748468.1	EST_HUMAN	Q13537 MER37 TRANSPOSABLE ELEMENT, COMPLETE CONSENSUS SEQUENCE. ;
7563	20080	32856	1.98	1.0E-59	AJ130894.1	NT	Homo sapiens mRNA for transcription factor
7703	20212	33100	0.93	1.0E-59	BE256814.1	EST_HUMAN	601111951F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3352692 5'
7703	20212	33101	0.93	1.0E-59	BE256814.1	EST_HUMAN	601111951F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3352692 5'
9307	21807	34855	1.2	1.0E-59	11419630	NT	Homo sapiens zinc finger protein 275 (ZNF275), mRNA
9522	22022	34979	0.82	1.0E-59		NT	Homo sapiens 3-hydroxyisobutyryl-Coenzyme A hydrolase (HIBCH), mRNA
9522	22022	34980	0.82	1.0E-59	11428849	NT	Homo sapiens 3-hydroxyisobutyryl-Coenzyme A hydrolase (HIBCH), mRNA
10734	20080	32958	9.52	1.0E-59	AJ130894.1	NT	Homo sapiens mRNA for transcription factor
795	13413	25917	1.28	8.0E-60	AW977845.1	EST_HUMAN	EST389849 IMAGE resequences, MAGO Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1520	14112	26648	3.21	8.0E-60	4759159	NT	Homo sapiens small nuclear ribonucleoprotein D3 polypeptide (18kD) (SNRPD3) mRNA
2216	14791	27364	1.95	8.0E-60	5174656	NT	Homo sapiens differentiation-related gene 1 (nickel-specific induction protein) (RTP) mRNA
2216	14791	27365	1.95	8.0E-60	5174656	NT	Homo sapiens differentiation-related gene 1 (nickel-specific induction protein) (RTP) mRNA
6135	18749	31506	1.01	8.0E-60	AB029004.1	NT	Homo sapiens mRNA for KIAA1081 protein, partial cds
6628	19224	32029	1.85	8.0E-60	S83182.1	NT	hyaluronan-binding protein=hepatocyte growth factor activator homolog [human, plasma, mRNA, 2408 nt]
7684	20195	33083	0.76	8.0E-60	11420841	NT	Homo sapiens phosphate cytidyltransferase 1, choline, beta isoform (PCYT1B), mRNA
7906	20448	33355	2.66	8.0E-60	X17033.1	NT	Human mRNA for integrin alpha-2 subunit
8869	21408	34332	4.03	8.0E-60	11428949	NT	Homo sapiens S-antigen; retina and pineal gland (arrestin) (SAG), mRNA
9392	21815	34764	0.98	8.0E-60	11417118	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
9392	21815	34765	0.98	8.0E-60	11417118	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
10455	22859	35689	0.68	8.0E-60	5453987	NT	Homo sapiens RAN binding protein 7 (RANBP7), mRNA
10712	23240	36255	5.93	8.0E-60	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
10712	23240	36256	5.93	8.0E-60	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
784	13403	25907	12.12	7.0E-60	AF055086.1	NT	Homo sapiens MHC class 1 region
785	13403	25907	52.6	7.0E-60	AF055086.1	NT	Homo sapiens MHC class 1 region
848	13484	25972	1.28	7.0E-60	450463.4	NT	Homo sapiens interleukin 10 receptor, beta (IL10RB), mRNA
2173	14750	27319	1.95	7.0E-60	AF077188.1	NT	Homo sapiens cullin 4A (CUL4A) mRNA, complete cds
4258	16844	29293	2.74	7.0E-60	4505488	NT	Homo sapiens ornithine decarboxylase 1 (ODC1) mRNA
9328	21842	34794	3.6	7.0E-60	H56041.1	EST_HUMAN	yr1204.r1 Scores fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:205087 5' similar to contains LTR5 repetitive element ;
11243	23773	36830	1.87	7.0E-60	H56041.1	EST_HUMAN	yr1204.r1 Scores fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:205087 5' similar to contains LTR5 repetitive element ;
8376	20916		7.56	6.0E-60	H52456.1	EST_HUMAN	yq78h09.r1 Scores fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:201953 5' similar to contains OFR repetitive element ;
87	12763	25245	1.13	5.0E-60	AB07917.1	EST_HUMAN	wf52c07.x1 Scores NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2359212 3'
87	12763	25246	1.13	5.0E-60	AB07917.1	EST_HUMAN	wf52c07.x1 Scores NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2359212 3'
3000	15616		1.47	4.0E-60	AA299037.1	EST_HUMAN	EST11498 Uterus Homo sapiens cDNA 5' end similar to similar to retrovirus-related pol
7390	19915	32779	0.7	4.0E-60	BF196068.1	EST_HUMAN	hr81f05.x1 NCI_LGAP_Kid11 Homo sapiens cDNA clone IMAGE:3134913 3' similar to SW:RHOP_MOUSE
9054	21591		0.62	4.0E-60	AL163278.2	NT	Q61085 GTP-RHO BINDING PROTEIN 1 ;
1899	14484	27044	5.26	3.0E-60	BE62611.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C078
1899	14484	27045	5.26	3.0E-60	BE62611.1	EST_HUMAN	601336446F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3690395 5'
1910	14495		2.4	3.0E-60	6031190	NT	601336446F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3690395 5'
							Homo sapiens prohibitin (PHB) mRNA



Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4556	17139	28587	1.88	3.0E-60	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
5822	18446	31168	2.04	3.0E-60	AW836186.1	EST_HUMAN	RC3-LT0023-200100-012-a01 LT0023 Homo sapiens cDNA
7034	18054	30477	1	3.0E-60	A1782814.1	EST_HUMAN	d80h11.y6 NCL_CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1534053 5' similar to SW:UDP_MOUSE
8341	20882	33802	5.3	3.0E-60	5174844	NT	P52624 URIDINE PHOSPHORYLASE;
8341	20882	33803	5.3	3.0E-60	5174844	NT	Homo sapiens proline dehydrogenase (proline oxidase) (PRODH) mRNA
8518	21058	33981	0.51	3.0E-60	A1040235.1	EST_HUMAN	Homo sapiens proline dehydrogenase (proline oxidase) (PRODH) mRNA
8677	21216	34136	4.75	3.0E-60	5174844	NT	α56d09.x1 Soares_NH-IMPu_S1 Homo sapiens cDNA clone IMAGE:1660337 3' similar to
12520	24980		1.71	3.0E-60	AA465286.1	EST_HUMAN	SW:FORM_MOUSE Q05860 FORMIN;
							Homo sapiens proline dehydrogenase (proline oxidase) (PRODH) mRNA
							ab07h04.r1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:840151 5' similar to contains
							LTR10.11 LTR10 repetitive element;
33	12712	25171	2.84	2.0E-60	AY008285.1	NT	Homo sapiens solute carrier (SLC25A18) mRNA, complete cds; nuclear gene for mitochondrial product
1470	14062	26597	2.86	2.0E-60	Z11694.1	NT	H. sapiens 41kDa protein kinase related to rat ERK2
1759	14349	26893	1.24	2.0E-60	M24603.1	NT	Human bcr protein mRNA, 5' end
3638	16241	28717	0.72	2.0E-60	4757867	NT	Homo sapiens v-rat murine sarcoma viral oncogene homolog B1 (BRAF) mRNA
3987	16585	28056	0.78	2.0E-60	AF231819.1	NT	Homo sapiens chromosome 21 unknown mRNA
4203	16782		0.65	2.0E-60	BF513458.1	EST_HUMAN	UI-H-BW1-ams-05-0-UI.s1 NCL_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3070952 3'
							nm01f12.y6 NCL_CGAP_Co9 Homo sapiens cDNA clone IMAGE:1076485 5' similar to contains THR.11 THR
6443	18045	31833	0.94	2.0E-60	A1791952.1	EST_HUMAN	repetitive element;
6618	19215	32020	1.65	2.0E-60	AF004877.1	NT	Homo sapiens pro-alpha 2(I) collagen (COL1A2) gene, complete cds
6816	19407	32224	0.89	2.0E-60	AF157476.1	NT	Homo sapiens DNA polymerase zeta catalytic subunit (REV3) mRNA, complete cds
6934	18042	30486	2.08	2.0E-60	4503044	NT	Homo sapiens corticotropin releasing hormone receptor 2 (CRHR2) mRNA
6934	18042	30487	2.08	2.0E-60	4503044	NT	Homo sapiens corticotropin releasing hormone receptor 2 (CRHR2) mRNA
7164	18698	32542	8.14	2.0E-60	AA311159.1	EST_HUMAN	EST181949 Jurkat T-cells V Homo sapiens cDNA 5' end similar to prothymosin, alpha
7164	18698	32543	8.14	2.0E-60	AA311159.1	EST_HUMAN	EST181949 Jurkat T-cells V Homo sapiens cDNA 5' end similar to prothymosin, alpha
7628	20140		1.05	2.0E-60	BF512808.1	EST_HUMAN	UI-H-BW1-ams-02-0-UI.s1 NCL_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3071210 3'
7947	20489	33398	1.05	2.0E-60	X85597.1	EST_HUMAN	HS15BEST human adult testis Homo sapiens cDNA clone CAM_EST15
8801	21340	34267	3.38	2.0E-60	L36033.1	NT	Human pre-B cell stimulating factor homologue (SDF1b) mRNA, complete cds
9888	22385	35362	2.67	2.0E-60	11891659	NT	Homo sapiens sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6A (SEMAGA), mRNA
9888	22385	35363	2.67	2.0E-60	11891659	NT	Homo sapiens sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6A (SEMAGA), mRNA
12168	24407		3.98	2.0E-60	11416192	NT	Homo sapiens non-histone chromosome protein 2 (S. cerevisiae)-like 1 (NH-P2L1), mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
12309	24908		1.71	2.0E-60	AF068757.1	NT	Homo sapiens somatostatin receptor subtype 3 (SSTR3) gene, 5' flanking region and partial cds
12311	24503		1.88	2.0E-60	11418088	NT	Homo sapiens similar to HSPC022 protein (H. sapiens) (LOC83504), mRNA
12329	24515		1.95	2.0E-60	AB011389.1	NT	Homo sapiens gene for AF-6, complete cds
546	13179	25657	0.92	1.0E-60	BE178586.1	EST_HUMAN	PM3-HT0605-270200-001-008 HT0605 Homo sapiens cDNA
3970	16568	29037	0.95	1.0E-60	AU143389.1	EST_HUMAN	AU143389 Y79AA1 Homo sapiens cDNA clone Y79AA1001854 5'
5091	17664	30104	1.32	1.0E-60	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
7889	20431	33340	0.73	1.0E-60	BE064410.1	EST_HUMAN	RC4-BT0311-141199-011-H06 BT0311 Homo sapiens cDNA
8690	21229		2.93	1.0E-60	AA244041.1	EST_HUMAN	nc04e12.11 NCI_CGAP_P11 Homo sapiens cDNA clone IMAGE:1007182 similar to contains L1.11 L1 repetitive element
8717	21256	34176	1.51	1.0E-60	AV754081.1	EST_HUMAN	AV754081 TP Homo sapiens cDNA clone TPGAED05 5'
1138	13741	26250	2.37	9.0E-61	AU119344.1	EST_HUMAN	AU119344 HEMBA1 Homo sapiens cDNA clone HEMBA1005583 5'
2894	15251	27821	1.11	8.0E-61	AW008478.1	EST_HUMAN	W05b10.1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:2506555 3'
2894	15251	27822	1.11	8.0E-61	AW008478.1	EST_HUMAN	W05b10.1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:2506555 3'
2978	15594		2.53	8.0E-61	X57147.1	NT	Human endogenous retrovirus pHE.1 (ERV9)
7638	20378	33284	0.79	8.0E-61	AA583988.1	EST_HUMAN	nm5906.st NCI_CGAP_Lar1 Homo sapiens cDNA clone IMAGE:1088218 3'
133	12799	25286	0.99	7.0E-61	7706670	NT	Homo sapiens PXR2b protein (PXR2b), mRNA
133	12799	25287	0.99	7.0E-61	7706670	NT	Homo sapiens PXR2b protein (PXR2b), mRNA
287	12943	25428	3.39	6.0E-61	BE409310.1	EST_HUMAN	601300938F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635480 5'
844	13460	25969	2.13	6.0E-61	BE409310.1	EST_HUMAN	601300938F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635480 5'
1368	13860	26485	13.81	6.0E-61	AF119880.1	NT	Homo sapiens PRO2014 mRNA, complete cds
1672	14264	26798	0.91	6.0E-61	BE257400.1	EST_HUMAN	601109238F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3330145 5'
1689	14281	26816	2.23	6.0E-61	AA596033.1	EST_HUMAN	nm68h09.st NCI_CGAP_Lar1 Homo sapiens cDNA clone IMAGE:1088897 3'
2172	14749	27318	0.93	6.0E-61	AY008285.1	NT	Homo sapiens solute carrier (SLC25A18) mRNA, complete cds; nuclear gene for mitochondrial product
3347	15957	28433	11.6	6.0E-61	AU130889.1	EST_HUMAN	AU130889 NT2RP3 Homo sapiens cDNA clone NT2RP3001263 5'
6182	18792	31561	3.06	6.0E-61	S79249.1	NT	Ig-beta/B28=CD79b (alternatively spliced) [human, B cells, mRNA Partial, 375 nt]
7380	19908	32771	1.71	6.0E-61	U24498.1	NT	Human autosomal dominant polycystic kidney disease protein 1 (PKD1) gene
7614	20127	33004	1.95	6.0E-61	AF035737.1	NT	Homo sapiens general transcription factor 2-1 (GTF2I) mRNA, complete cds
12065	13460	25969	1.38	6.0E-61	BE409310.1	EST_HUMAN	601300938F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635480 5'
236	12896	25379	2.06	5.0E-61	8922990	NT	Homo sapiens hypothetical protein FLJ11316 (FLJ11316), mRNA
236	12896	25380	2.06	5.0E-61	8922990	NT	Homo sapiens hypothetical protein FLJ11316 (FLJ11316), mRNA
382	13029	25517	0.81	5.0E-61	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
1718	14310	26849	2.36	5.0E-61	4506008	NT	Homo sapiens protein phosphatase 1, regulatory subunit 10 (PPP1R10) mRNA
3071	15886	28158	1.9	5.0E-61	AL163279.2	NT	Homo sapiens chromosome 21 segment HS21C079

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4053	16850		1.91	5.0E-61	AJ229041.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 1/3
5144	13029	25517	0.89	5.0E-61	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
11856	24215		4.95	4.0E-61	AV731140.1	EST_HUMAN	AV731140 HTF Homo sapiens cDNA clone HTFARB01 5'
4292	18878	29325	0.98	3.0E-61	BE396278.1	EST_HUMAN	601309789F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3631220 5'
8360	20800	33821	0.63	3.0E-61	AF150190.1	EST_HUMAN	AF150190 Human mRNA from cd34+ stem cells Homo sapiens cDNA clone CBDAGB04
8829	21168	34083	0.51	3.0E-61	AA301233.1	EST_HUMAN	EST14323 Testis tumor Homo sapiens cDNA 5' end
8829	21168	34084	0.51	3.0E-61	AA301233.1	EST_HUMAN	EST14323 Testis tumor Homo sapiens cDNA 5' end
524	13156	25638	1.29	2.0E-61	8822829	NT	Homo sapiens hypothetical protein FLJ11028 (FLJ11028), mRNA
1254	13851	26368	1.98	2.0E-61	BE168410.1	EST_HUMAN	QV3-HT0513-060400-147-d01 HT0513 Homo sapiens cDNA
1254	13851	26369	1.98	2.0E-61	BE168410.1	EST_HUMAN	QV3-HT0513-060400-147-d01 HT0513 Homo sapiens cDNA
1705	14288	28835	1.22	2.0E-61	N53039.1	EST_HUMAN	y63d11.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:246453 3' similar to
2667	15225		1.54	2.0E-61	N38397.1	EST_HUMAN	g9:L25444 60S RIBOSOMAL PROTEIN L35A (HUMAN);
6557	19155	31951	0.85	2.0E-61	11428168	NT	Homo sapiens ATPase, H <sup>+</sup> transporting, lysosomal (vacuolar proton pump) non-catalytic accessory protein
8945	21483	34406	1.01	2.0E-61	AV694317.1	EST_HUMAN	1A (110/116KD) (ATP6N1A), mRNA
9481	21880		1.55	2.0E-61	AB011108.1	NT	AV694317 GKC Homo sapiens cDNA clone GKDELG08 5'
9836	22334	35316	1.59	2.0E-61	AW500256.1	EST_HUMAN	Homo sapiens mRNA for KIAA0836 protein, partial cds
10149	22844	35638	1.99	2.0E-61	11421778	NT	UI-HF-BND-ekd-f-12-0-U1.s1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3076774 5'
10764	23288		9.83	2.0E-61	11419729	NT	Homo sapiens polymerase (RNA) III (DNA directed) (39KD) (RPC39), mRNA
460	13094		0.91	1.0E-61	AL163203.2	NT	Homo sapiens ribosomal protein L44 (RPL44), mRNA
805	13422	25928	1.25	1.0E-61	5453829	NT	Homo sapiens chromosome 21 segment HS21C003
1443	14036	26565	0.98	1.0E-61	AL163203.2	NT	Homo sapiens origin recognition complex, subunit 2 (yeast homolog)-like (ORC2L) mRNA
1898	14483	27043	3.97	1.0E-61	6005983	NT	Homo sapiens chromosome 21 segment HS21C003
2238	14813	27385	1.55	1.0E-61	AW827281.1	EST_HUMAN	Homo sapiens zona pellucida glycoprotein 3A (sperm receptor) (ZP3A), mRNA
3422	16030	28511	0.88	1.0E-61	7682319	NT	xn11b09.y1 NCL_CGAP_L15 Homo sapiens cDNA clone IMAGE:2693369 5' similar to contains element
4534	17118	29564	1.48	1.0E-61	4759249	NT	MSR1 repetitive element
4534	17118	29565	1.48	1.0E-61	4759249	NT	Homo sapiens KIAA0808 gene product (KIAA0808), mRNA
4982	17556	29998	10.61	1.0E-61	AW298181.1	EST_HUMAN	Homo sapiens TRAF family member-associated NFKB activator (TANK) mRNA
4982	17556	29999	10.61	1.0E-61	AW298181.1	EST_HUMAN	Homo sapiens TRAF family member-associated NFKB activator (TANK) mRNA
5868	18480	31218	0.89	1.0E-61	7682303	NT	UI-H-BW0-ajit-b-08-0-U1.s1 NCL_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:2732871 3'
6043	18682	31401	1.17	1.0E-61	11416891	NT	UI-H-BW0-ajit-b-08-0-U1.s1 NCL_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:2732871 3'
6981	19479	32300	8.17	1.0E-61	M30135.1	NT	Homo sapiens KIAA0783 gene product (KIAA0783), mRNA
							Homo sapiens survival of motor neuron 1, telomeric (SMN1), mRNA
							Human P40 T-cell and mast cell growth factor (hP40) gene, complete cds

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7148	19681	32522	0.73	1.0E-61	4759171	NT	Homo sapiens SC35-interacting protein 1 (SRRP129), mRNA
7242	19771	32627	1.54	1.0E-61	8923130	NT	Homo sapiens hypothetical protein FLJ20128 (FLJ20128), mRNA
7242	19771	32628	1.54	1.0E-61	8923130	NT	Homo sapiens hypothetical protein FLJ20128 (FLJ20128), mRNA
8075	20617	33531	6.29	1.0E-61	11034840	NT	Homo sapiens growth hormone releasing hormone (GHRH), mRNA
8255	20796	33713	3.19	1.0E-61	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
9206	21723		2.29	1.0E-61	AW999726.1	EST_HUMAN	MRO-BN0070-040400-010-101 BN0070 Homo sapiens cDNA
9279	21805	34756	1.1	1.0E-61	11416280	NT	Homo sapiens cadherin 18 (CDH18), mRNA
9942	22437	35414	5.76	1.0E-61	11428892	NT	Homo sapiens KIAA0971 protein (KIAA0971), mRNA
10514	23052	36063	2.82	1.0E-61	11425578	NT	Homo sapiens actinin, alpha 4 (ACTN4), mRNA
11751	24966		1.58	1.0E-61	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
11783	24955	30629	3.23	1.0E-61	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
11783	24955	30630	3.23	1.0E-61	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
12173	24412	30945	1.61	1.0E-61	M20809.1	NT	Human kappa-immunoglobulin germline pseudogene (Chr1) variable region (subgroup V kappa I)
12494	24622	30891	17.77	1.0E-61	11418127	NT	Homo sapiens GTP binding protein 1 (GTPBP1), mRNA
10259	22754	35742	1.82	9.0E-62	BE064386.1	EST_HUMAN	RC4-BT0310-110300-015-110 BT0310 Homo sapiens cDNA
4649	17231	29688	1.03	8.0E-62	AA830420.1	EST_HUMAN	cc66h11.1 st NCL CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1354725 3' similar to SW:POL_MLVK
12652	24724		1.59	8.0E-62	AA768861.1	EST_HUMAN	P31795 POL POLYPYRROLINE ;
1146	13749	26258	1.31	7.0E-62	AV714334.1	EST_HUMAN	n275g01 st NCL CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1301328 3'
3554	16158	28641	0.7	7.0E-62	P17480	SWISSPROT	AV714334 DCB Homo sapiens cDNA clone DCBAMA08 5'
8075	18892	31438	0.96	7.0E-62	11427985	NT	NUCLEOLAR TRANSCRIPTION FACTOR 1 (UPSTREAM BINDING FACTOR 1) (UBF-1) (AUTOANTIGEN NOR-90)
11229	23760	36816	5.72	7.0E-62	AI208881.1	EST_HUMAN	Homo sapiens hypothetical protein (FLJ20261), mRNA
3029	15845		1.6	6.0E-62	U09410.1	NT	qg58a04.x1 Scores_testis_NHT Homo sapiens cDNA clone IMAGE:1839150 3' similar to TR:O15103
3431	16039		4.97	6.0E-62	11418255	NT	O15103 HYPOTHETICAL 27.3 KD PROTEIN ;
7621	20134	33011	3.43	6.0E-62	A1762801.1	EST_HUMAN	Human zinc finger protein ZNF131 mRNA, partial cds
7621	20134	33012	3.43	6.0E-62	A1762801.1	EST_HUMAN	Homo sapiens CGI-58 protein (CGI-58), mRNA
8030	20572		0.75	6.0E-62	AW501124.1	EST_HUMAN	w04402.x1 NCL CGAP_GCB1 Homo sapiens cDNA clone IMAGE:2389251 3'
8200	20741	33654	1.35	6.0E-62	11431139	NT	w04402.x1 NCL CGAP_GCB1 Homo sapiens cDNA clone IMAGE:2389251 3'
9276	21802	34752	3.92	6.0E-62	AW814393.1	EST_HUMAN	UI-HF-BF0p-at-d-09-0-U1.r1 NIH_MGC_51 Homo sapiens cDNA clone IMAGE:3072833 5'
441	13074	25569	1.99	5.0E-62	AI950528.1	EST_HUMAN	Homo sapiens CGI-18 protein (LOC51008), mRNA
							MIR3-ST0203-130100-025-a09 ST0203 Homo sapiens cDNA
							wx51e07.x1 NCL CGAP_Lu28 Homo sapiens cDNA clone IMAGE:2547204 3' similar to SW:GG95_HUMAN
							Q08376 GOLGIN-95 ; contains element MER22 repetitive element ;

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2451	15018	27589	3	5.0E-62	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
2451	15018	27590	3	5.0E-62	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
2626	15188	27755	0.87	5.0E-62	U39487.1	NT	Human xanthine dehydrogenase/oxidase mRNA, complete cds
2626	15188	27756	0.87	5.0E-62	U39487.1	NT	Human xanthine dehydrogenase/oxidase mRNA, complete cds
3466	16073	28546	2.52	5.0E-62	4508758	NT	Homo sapiens ryanodine receptor 3 (RYR3) mRNA
4421	17006	29449	2.23	5.0E-62	AA431083.1	EST_HUMAN	zw78e09.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:782344 3' similar to SW:NRDC_RAT
4657	17239		0.95	5.0E-62	AW905887.1	EST_HUMAN	P47245 NARDILYSIN
8485	21024	33941	0.64	5.0E-62	4508758	NT	RC5-NN1089-100500-021-H03 NN1089 Homo sapiens cDNA
9436	21862	34911	5.85	5.0E-62	AW410687.1	EST_HUMAN	Homo sapiens ryanodine receptor 3 (RYR3) mRNA
11144	23652	36693	2.54	5.0E-62	11425574	NT	ho7g09.x1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2861616 5'
11144	23652	36694	2.54	5.0E-62	11425574	NT	Homo sapiens muscle specific gene (M8), mRNA
873	13488	26003	4.05	4.0E-62	AW161479.1	EST_HUMAN	Homo sapiens muscle specific gene (M8), mRNA
873	13488	26004	4.05	4.0E-62	AW161479.1	EST_HUMAN	au71d03.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2781701 5' similar to gb:M37104
874	13488	26003	3.94	4.0E-62	AW161479.1	EST_HUMAN	ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
874	13488	26004	3.94	4.0E-62	AW161479.1	EST_HUMAN	au71d03.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2781701 5' similar to gb:M37104
1511	14103		1.01	4.0E-62	AA311281.1	EST_HUMAN	ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
2498	15082	27636	1.7	4.0E-62	A1827900.1	EST_HUMAN	au71d03.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2781701 5' similar to gb:M37104
2498	15082	27637	1.7	4.0E-62	A1827900.1	EST_HUMAN	ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
3446	16054		7.95	4.0E-62	4557887	NT	EST182043 Jurkat T-cells V Homo sapiens cDNA 5' end
6081	18698	31445	1.79	4.0E-62	4506978	NT	wf12b08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2350359 3' similar to gb:X57138_rna1 HISTONE H2B.2 (HUMAN);
7223	19754	32609	1.88	4.0E-62	11421041	NT	gb:X57138_rna1 HISTONE H2B.2 (HUMAN);
7630	20142	33021	2.5	4.0E-62	7657057	NT	gb:X57138_rna1 HISTONE H2B.2 (HUMAN);
7630	20142	33022	2.5	4.0E-62	7657057	NT	Homo sapiens keratin 18 (KRT18) mRNA
8112	20653	33562	0.95	4.0E-62	11428973	NT	Homo sapiens solute carrier family 13 (sodium-dependent dicarboxylate transporter), member 2 (SLC13A2) mRNA
8439	18041	31829	2.58	4.0E-62	11420654	NT	Homo sapiens ubiquitin specific protease 9, X chromosome (Drosophila fat facets related) (USP9X), mRNA
7223	19754	32609	1.88	4.0E-62	11421041	NT	Homo sapiens phosphoribosyl pyrophosphate synthetase 2 (PPPS2), mRNA
7630	20142	33021	2.5	4.0E-62	7657057	NT	Homo sapiens eukaryotic translation initiation factor 2B, subunit 2 (beta, 39kD) (EIF2B2), mRNA
7630	20142	33022	2.5	4.0E-62	7657057	NT	Homo sapiens eukaryotic translation initiation factor 2B, subunit 2 (beta, 39kD) (EIF2B2), mRNA
8112	20653	33562	0.95	4.0E-62	11428973	NT	Homo sapiens 26S proteasome-associated pad1 homolog (POH1), mRNA

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8780	21319	34243	5.44	4.0E-62	AB033089.1	NT	Homo sapiens mRNA for KIAA1263 protein, partial cds
10890	23411	36429	2.16	4.0E-62	Z78786.1	NT	H. sapiens flow-sorted chromosome 6 HindIII fragment, SC6pA16D3
10890	23411	36430	2.16	4.0E-62	Z78786.1	NT	H. sapiens flow-sorted chromosome 6 HindIII fragment, SC6pA16D3
11146	23654	36696	2.05	4.0E-62	AW023559.1	EST_HUMAN	df58g04.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2487751 5'
12003	24912		1.89	4.0E-62	11418192	NT	Homo sapiens non-histone chromosome protein 2 (S. cerevisiae)-like 1 (NHP2L1), mRNA
12420	24606	30887	1.78	4.0E-62	11418322	NT	Homo sapiens cadherin EGF LAG seven-pass G-type receptor 1 (CELSR1), mRNA
12475	24600	30884	15	4.0E-62	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
12528	24642	30898	2.66	4.0E-62	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
78	12755	26236	0.85	3.0E-62	4557784	NT	Homo sapiens neurofibromin 2 (bilateral acoustic neuroma) (NF2) mRNA
3082	15697	28169	0.93	3.0E-62	AB040909.1	NT	Homo sapiens mRNA for KIAA1476 protein, partial cds
3082	15697	28170	0.93	3.0E-62	AB040909.1	NT	Homo sapiens mRNA for KIAA1476 protein, partial cds
3761	16362	28830	5.68	3.0E-62	X52855.1	NT	Human cyclophilin-related processed pseudogene
8477	21016	33932	3.96	3.0E-62	A1632733.1	EST_HUMAN	wa33f04.x1 NCI CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2289903 3' similar to contains THR12
1274	13870	26390	2.31	2.0E-62	AL163284.2	NT	THR repetitive element ;
8709	21248	34170	4.31	2.0E-62	BF329911.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C084
8709	21248	34171	4.31	2.0E-62	BF329911.1	EST_HUMAN	RC0-BN0284-300500-031-e05 BN0284 Homo sapiens cDNA
10076	22571		3.84	2.0E-62	AF224669.1	NT	RC0-BN0284-300500-031-e05 BN0284 Homo sapiens cDNA
11537	23985		19.58	2.0E-62	BF330676.1	EST_HUMAN	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3
1082	13687	26199	1.74	1.0E-62	AF248540.1	NT	(UBE2D3) genes, complete cds
1592	14185	26717	9.15	1.0E-62	L78810.1	NT	QV4-BT0257-081199-017-e03 BT0257 Homo sapiens cDNA
1834	14422	26972	1.05	1.0E-62	AA825207.1	EST_HUMAN	Homo sapiens intersectin 2 (SH3D1B) mRNA, complete cds
2939	15555	28031	1.22	1.0E-62	AL039044.1	EST_HUMAN	Homo sapiens ADP/ATP carrier protein (ANT-2) gene, complete cds
4625	17208	29656	1.46	1.0E-62	8923201	NT	Homo sapiens ADP/ATP carrier protein (ANT-2) gene, complete cds
5305	17867	30290	0.74	1.0E-62	AA148822.1	EST_HUMAN	af70e11.1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1047404 5' similar to WP:K01H12.1
7188	19720	32567	1.01	1.0E-62	AA490080.1	EST_HUMAN	CE03453 ;
7199	19730	32581	3	1.0E-62	AA722878.1	EST_HUMAN	DKFZp566F104_r1 588 (synonym: hfkd2) Homo sapiens cDNA clone DKFZp566F104 5'
7199	19730	32582	3	1.0E-62	AA722878.1	EST_HUMAN	Homo sapiens hypothetical protein FLJ20212 (FLJ20212), mRNA
8692	21231	34151	0.71	1.0E-62	AA280050.1	EST_HUMAN	z06b08.r1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:491511 5' similar to
8986	21526	34455	1.64	1.0E-62	7662289	NT	SW:C961_BOVIN P10897 CYTOCHROME B561 ;
							ab05c02.s1 Strategene fetal retina 937202 Homo sapiens cDNA clone IMAGE:838906 3'
							zg89f10.s1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:409771 3'
							zg89f10.s1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:409771 3'
							zs93e07.r1 NCI CGAP_GCB1 Homo sapiens cDNA clone IMAGE:705060 5'
							Homo sapiens KIAA0763 gene product (KIAA0763), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8988	21528	34456	1.04	1.0E-62	7682289	NT	Homo sapiens KIAA0763 gene product (KIAA0763), mRNA
9030	21567	34495	2.39	1.0E-62	X15533.1	NT	H. sapiens lysosomal acid phosphatase gene (EC 3.1.3.2) Exon 9
9030	21567	34498	2.39	1.0E-62	X15533.1	NT	H. sapiens lysosomal acid phosphatase gene (EC 3.1.3.2) Exon 9
9478	21875	34822	2.95	1.0E-62	AA485170.1	EST_HUMAN	aa33d08.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:815055 3'
11245	23775	36832	2.49	1.0E-62	Z76698.1	NT	H. sapiens flow-sorted chromosome 8 HindIII fragment, SC6pA14D8
12289	24490		6.66	1.0E-62	11418322	NT	Homo sapiens cadherin EGF LAG seven-pass G-type receptor 1 (CELSR1), mRNA
12508	24630	30894	2.04	1.0E-62	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
360	13009	25492	1.88	9.0E-63	AW816405.1	EST_HUMAN	QV4-ST0234-181189-037-R05 ST0234 Homo sapiens cDNA
2383	14952	29162	2.15	9.0E-63	C18159.1	EST_HUMAN	C18159 Human placenta cDNA (TFujliwera) Homo sapiens cDNA clone GEN-558C10 5'
4114	16708	29163	9.09	9.0E-63	AB002348.2	NT	Homo sapiens mRNA for KIAA0350 protein, partial cds
5453	18022	37142	3.63	9.0E-63	11418185	NT	Homo sapiens acylase 2, mitochondrial (ACO2), mRNA
5657	18284	30762	1.55	9.0E-63	Y15056.1	NT	Homo sapiens mRNA for PKB kinase
7234	19764	32620	3.66	9.0E-63	11426985	NT	Homo sapiens nucleoporin 88kD (NUP88), mRNA
8268	20809	33729	1.12	9.0E-63	11421160	NT	Homo sapiens Ras association (RalGDS/AF-6) domain family 2 (RASSF2), mRNA
2382	14951	27524	1.5	8.0E-63	4557734	NT	Homo sapiens monoamine oxidase A (MAOA), nuclear gene encoding mitochondrial protein, mRNA
2412	14980	27555	2.47	8.0E-63	5031810	NT	Homo sapiens IL2-Inducible T-cell kinase (ITK), mRNA
3508	18113	28590	4.82	8.0E-63	AF198349.1	NT	Gallus gallus Dach2 protein (Dach2) mRNA, complete cds
3508	18113	28591	4.82	8.0E-63	AF198349.1	NT	Gallus gallus Dach2 protein (Dach2) mRNA, complete cds
4352	18939	28381	3.64	8.0E-63	AL163288.2	NT	Homo sapiens chromosome 21 segment HS21C088
564	13575		2.31	7.0E-63	AB72137.1	EST_HUMAN	wm55g11.x1 NCL_CGAP_U12 Homo sapiens cDNA clone IMAGE:2439908 3'
5542	18174		34.88	6.0E-63	AA420803.1	EST_HUMAN	nc63f02.r1 NCL_CGAP_P1 Homo sapiens cDNA clone IMAGE:745947 similar to gb:Y00361 60S
8807	21348	34270	0.5	5.0E-63	11528464	NT	RIBOSOMAL PROTEIN (HUMAN);
3363	15971	28449	0.81	4.0E-63	AL163278.2	NT	Homo sapiens G protein-coupled receptor 51 (GPR51), mRNA
3881	18479	28940	0.98	4.0E-63	AB014607.1	NT	Homo sapiens chromosome 21 segment HS21C078
3881	18479	28941	0.98	4.0E-63	AB014607.1	NT	Homo sapiens mRNA for KIAA0707 protein, partial cds
6573	19171	31908	5.46	4.0E-63	AW750372.1	EST_HUMAN	Homo sapiens mRNA for KIAA0707 protein, partial cds
6573	19171	31909	5.46	4.0E-63	AW750372.1	EST_HUMAN	CM3-BT0595-190100-072-a09 BT0595 Homo sapiens cDNA
11012	23526	36561	2.3	4.0E-63	AW134709.1	EST_HUMAN	CM3-BT0595-190100-072-a09 BT0595 Homo sapiens cDNA
11012	23526	36562	2.3	4.0E-63	AW134709.1	EST_HUMAN	UI-H-B11-abq-q-02-Q-UI.s1 NCL_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2712482 3'
1979	14562	27121	1.75	3.0E-63	AB018280.1	NT	UI-H-B11-abq-q-02-Q-UI.s1 NCL_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2712482 3'
2807	15359	27928	1.96	3.0E-63	J00310.1	NT	Homo sapiens mRNA for KIAA0717 protein, partial cds
							Human Met-RNA-I gene 1

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2848	13877	26399	11.17	3.0E-63	6005963	NT	Homo sapiens zinc finger protein 144 (Mef-18) (ZNF144), mRNA
6600	19197	32002	29.68	3.0E-63	11545810	NT	Homo sapiens hepatocellular carcinoma antigen gene 520 (LOC63928), mRNA
9622	22122	35086	0.77	3.0E-63	BE876158.1	EST_HUMAN	601485656F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3888253 5'
9622	22122	35087	0.77	3.0E-63	BE876158.1	EST_HUMAN	601485656F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3888253 5'
205	12866	25351	3.47	2.0E-63	U07804.1	NT	Human DNA topoisomerase I mRNA, partial cds
212	12873	25359	1.4	2.0E-63	4885226	NT	Homo sapiens eyes absent (Drosophila) homolog 2 (EYA2), mRNA
523	13155		5.21	2.0E-63	4557624	NT	Homo sapiens glutamate-cysteine ligase (gamma-glutamylcysteine synthetase), catalytic (72.8kD) (GLCLC) mRNA
859	13475	25988	6.6	2.0E-63	7657042	NT	Homo sapiens Down syndrome candidate region 1 (DSCR1), mRNA
1612	14205	26739	3.37	2.0E-63	AB030388.1	NT	Homo sapiens RHCE mRNA for Rh blood CE group antigen polypeptide, complete cds
1612	14205	26740	3.37	2.0E-63	AB030388.1	NT	Homo sapiens RHCE mRNA for Rh blood CE group antigen polypeptide, complete cds
1803	14393	26938	1.06	2.0E-63	BE410739.1	EST_HUMAN	601301627F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3836103 5'
2128	14706	27277	1.33	2.0E-63	A1863981.1	EST_HUMAN	wj5402.x1 NCI CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2406603 3' similar to gb:M57609 GLI3 PROTEIN (HUMAN);
3192	15804	28277	1	2.0E-63	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
3324	15934	28411	1.7	2.0E-63	AF109718.1	NT	Homo sapiens chromosome 3 subtelomeric region
3976	16574	29044	2.09	2.0E-63	L39891.1	NT	Homo sapiens polycystic kidney disease-associated protein (PKD1) gene, complete cds
4990	17564	30009	1.18	2.0E-63	AF111167.2	NT	Homo sapiens jun dimerization protein gene, partial cds; cfos gene, complete cds; and unknown gene
5467	24742	30420	1.95	2.0E-63	11419429	NT	Homo sapiens similar to ectonucleotide pyrophosphatase/phosphodiesterase 3 (H. sapiens) (LOC63214), mRNA
6045	18664	31404	2.51	2.0E-63	BF373541.1	EST_HUMAN	QV1-FT0170-040700-265-c05 FT0170 Homo sapiens cDNA
6045	18664	31405	2.51	2.0E-63	BF373541.1	EST_HUMAN	QV1-FT0170-040700-265-c05 FT0170 Homo sapiens cDNA
6333	18939	31715	1.04	2.0E-63	11421940	NT	Homo sapiens protein kinase, cAMP-dependent, regulatory, type II, beta (PRKAR2B), mRNA
6333	18939	31716	1.04	2.0E-63	11421940	NT	Homo sapiens protein kinase, cAMP-dependent, regulatory, type II, beta (PRKAR2B), mRNA
							Human germline T-cell receptor beta chain Dopamine-beta-hydroxylase-like, TRY1, TRY2, TRY3, TCRBV27S1P, TCRBV22S1A2N1T, TCRBV9S1A1T, TCRBV7S1A1N2T, TCRBV5S1A1T, TCRBV13S3, TCRBV6S7P, TCRBV7S3A2T, TCRBV13S2A1T, TCRBV9S2A2PT, TCRBV7S2A1N4T, TCRBV13S9/13S>
6803	19394	32210	1.62	2.0E-63	U66059.1	NT	Homo sapiens MIST mRNA, partial cds
6844	19434	32249	0.87	2.0E-63	AB032369.1	NT	Homo sapiens MIST mRNA, partial cds
6844	19434	32250	0.87	2.0E-63	AB032369.1	NT	Homo sapiens MIST mRNA, partial cds
7135	19474	32295	1.43	2.0E-63	9810365	NT	Homo sapiens Carbonic anhydrase-related protein 10 (LOC56934), mRNA
7135	19474	32296	1.43	2.0E-63	9910365	NT	Homo sapiens Carbonic anhydrase-related protein 10 (LOC56934), mRNA



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7755	20263	33158	0.89	2.0E-63	AB046844.1	NT	Homo sapiens mRNA for KIAA1624 protein, partial cds
8470	21010	33927	2.91	2.0E-63	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
8984	21522	34449	1.12	2.0E-63	11420949	NT	Homo sapiens kinesin family member 3B (KIF3B), mRNA
8984	21522	34450	1.12	2.0E-63	11420949	NT	Homo sapiens kinesin family member 3B (KIF3B), mRNA
8982	22350	35331	0.9	2.0E-63	AL163218.2	NT	Homo sapiens chromosome 21 segment HS21C018
10625	23157	36170	22.7	2.0E-63	N78945.1	EST_HUMAN	zb18b05.s1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:302385 3' similar to gb:X17206.40S RIBOSOMAL PROTEIN S4 (HUMAN);
10652	23184	36188	2.83	2.0E-63	AF098810.1	NT	Homo sapiens neurxin III-alpha gene, partial cds
10652	23184	36189	2.83	2.0E-63	AF098810.1	NT	Homo sapiens neurxin III-alpha gene, partial cds
11888	24851	30702	6.92	2.0E-63	11418185	NT	Homo sapiens aconitase 2, mitochondrial (ACO2), mRNA
12823	24701	30864	1.4	2.0E-63	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
4434	17020	29460	3.52	1.0E-63	F08485.1	EST_HUMAN	HS22VD111 normalized infant brain cDNA Homo sapiens cDNA clone c-zvd11
4434	17020	29461	3.52	1.0E-63	F08485.1	EST_HUMAN	HS22VD111 normalized infant brain cDNA Homo sapiens cDNA clone c-zvd11
5555	18187	30602	1.32	1.0E-63	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region, segment 2/2
5943	18563	31293	1.38	1.0E-63	AW582266.1	EST_HUMAN	Q105-ST0215-060100-083-b09 ST0215 Homo sapiens cDNA
8408	20948		2.21	1.0E-63	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
12581	24970		17.03	1.0E-63	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
6122	18737	31489	1.06	9.0E-64	AW401433.1	EST_HUMAN	UI-HF-BKO-aad-b-09-Q-U1r1 NIH_MGC_38 Homo sapiens cDNA clone IMAGE:3053153 5'
7808	20351	33259	4.35	9.0E-64	AI478186.1	EST_HUMAN	hm50b07.x1 NCI_CGAP_K1d11 Homo sapiens cDNA clone IMAGE:2181525 3'
1084	13889		13.09	8.0E-64	BE280796.1	EST_HUMAN	601155232F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3139038 5'
6289	18897	31668	3.17	8.0E-64	BE885755.1	EST_HUMAN	601508868F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3910338 5'
11694	24109		1.48	8.0E-64	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
11752	24148		3.56	8.0E-64	T60651.1	EST_HUMAN	y698b02.r1 Strategene lung (#6937210) Homo sapiens cDNA clone IMAGE:79179 5'
3582	16186		0.84	7.0E-64	BE394321.1	EST_HUMAN	601311455F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3633204 5'
4838	17418	28868	2.85	7.0E-64	4507490	NT	Homo sapiens thimet oligopeptidase 1 (THOP1) mRNA
4838	17418	28869	2.85	7.0E-64	4507490	NT	Homo sapiens thimet oligopeptidase 1 (THOP1) mRNA
7766	20274	33172	0.68	7.0E-64	4506786	NT	Homo sapiens IQ motif containing GTPase activating protein 1 (IQGAP1) mRNA
8946	22441	35418	4.54	7.0E-64	Y07948.1	NT	Homo sapiens EW's, gar22, rrp22 and barn22 genes
1760	14350	26894	2.4	6.0E-64	A1651992.1	EST_HUMAN	w651e07.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2309220 3' similar to gb:M15182 BETA-GLUCURONIDASE PRECURSOR (HUMAN);
1760	14350	26895	2.4	6.0E-64	A1651992.1	EST_HUMAN	w651e07.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2309220 3' similar to gb:M15182 BETA-GLUCURONIDASE PRECURSOR (HUMAN);
3158	15770	28236	4.46	6.0E-64	AW028445.1	EST_HUMAN	w13e03.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:2529436 3'
3158	15770	28237	4.46	6.0E-64	AW028445.1	EST_HUMAN	w13e03.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:2529436 3'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5805	18430	31149	3.71	6.0E-64	Y18933.1	NT	Homo sapiens MCP-1 gene and enhancer region
5805	18430	31150	3.71	6.0E-64	Y18933.1	NT	Homo sapiens MCP-1 gene and enhancer region
5823	18447	31169	5.6	6.0E-64	M13975.1	NT	Homo sapiens protein kinase C beta-II type (PRKCB1) mRNA, complete cds
7286	19814	32670	2.45	6.0E-64	11525879	NT	Homo sapiens mesenchyme homeo box 1 (MEOX1), mRNA
7286	19814	32671	2.45	6.0E-64	11525879	NT	Homo sapiens mesenchyme homeo box 1 (MEOX1), mRNA
9250	21776	34727	8.24	6.0E-64	11420555	NT	Homo sapiens acetyl-CoA synthetase (LOC55902), mRNA
9425	21934	34883	2	6.0E-64	AF274753.1	NT	Homo sapiens progressive ankylosis-like protein (ANK) mRNA, complete cds
9634	22134	35099	2.23	6.0E-64	S76475.1	NT	tKc [human, brain, mRNA, 2715 nt]
10649	23181	36184	7.87	6.0E-64	11420197	NT	Homo sapiens stromal antigen 3 (STAG3), mRNA
10849	23181	36195	7.87	6.0E-64	11420197	NT	Homo sapiens stromal antigen 3 (STAG3), mRNA
10896	15770	28238	1.64	6.0E-64	AW026445.1	EST_HUMAN	w13e03.x1 NCI_CGAP_Bm23 Homo sapiens cDNA clone IMAGE:2529436 3'
10896	15770	28237	1.64	6.0E-64	AW026445.1	EST_HUMAN	w13e03.x1 NCI_CGAP_Bm23 Homo sapiens cDNA clone IMAGE:2529436 3'
11903	24242	31008	2.45	6.0E-64	11526198	NT	Homo sapiens interleukin 10 receptor, beta (IL10RB), mRNA
853	13469	25979	3.09	5.0E-64	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
853	13469	25980	3.09	5.0E-64	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
1383	13977	26504	0.95	5.0E-64	AB020710.1	NT	Homo sapiens mRNA for KIAA0903 protein, partial cds
1487	14059	26593	2.55	5.0E-64	L40933.1	NT	Homo sapiens phosphoglucomutase-related protein (PGMRP) gene, complete cds
1487	14059	26594	2.55	5.0E-64	L40933.1	NT	Homo sapiens phosphoglucomutase-related protein (PGMRP) gene, complete cds
1749	14339	26886	1.52	5.0E-64	U99358.1	NT	Human (3)mbt protein homolog mRNA, complete cds
2853	14120	26657	3.5	5.0E-64	7662205	NT	Homo sapiens KIAA0618 gene product (KIAA0618), mRNA
2853	14120	26658	3.5	5.0E-64	7662205	NT	Homo sapiens KIAA0618 gene product (KIAA0618), mRNA
4032	16630	28099	7.79	5.0E-64	AF017433.1	NT	Homo sapiens putative transcription factor CR53 (CR53) mRNA, partial cds
4181	16771	29220	0.68	5.0E-64	AB020710.1	NT	Homo sapiens mRNA for KIAA0903 protein, partial cds
10692	23222	36235	3.91	4.0E-64	AW813783.1	EST_HUMAN	RC3-ST0197-120200-015-a03 ST0197 Homo sapiens cDNA
10692	23222	36236	3.91	4.0E-64	AW813783.1	EST_HUMAN	RC3-ST0197-120200-015-a03 ST0197 Homo sapiens cDNA
2299	14814	27386	3.14	3.0E-64	C18895.1	EST_HUMAN	C18895 Human placenta cDNA (TFujiwara) Homo sapiens cDNA clone GEN:589E02 5'
3293	15904	28384	0.76	3.0E-64	BE784381.1	EST_HUMAN	601589565F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943577 5'
3491	16096	28570	2.57	3.0E-64	AV711714.1	EST_HUMAN	AV711714 DCA Homo sapiens cDNA clone DCAAMC01 5'
3491	16096	28571	2.57	3.0E-64	AV711714.1	EST_HUMAN	AV711714 DCA Homo sapiens cDNA clone DCAAMC01 5'
6232	18941	31613	1.53	3.0E-64	Z26273.1	NT	H. sapiens isoform 1 gene for L-type calcium channel, exon 28
6819	19216	32021	3.11	3.0E-64	BF370000.1	EST_HUMAN	RC6-FN0019-280600-011-G11 FN0019 Homo sapiens cDNA
8402	20942	33864	1.83	3.0E-64	AF248953.1	NT	Homo sapiens golgi matrix protein GM130 (GOLGA2) mRNA, complete cds
8402	20942	33865	1.83	3.0E-64	AF248953.1	NT	Homo sapiens golgi matrix protein GM130 (GOLGA2) mRNA, complete cds

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8432	20972	33885	4.49	3.0E-64	BE206521.1	EST_HUMAN	bb72h12.y1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3047975 5' similar to gb:L08069 DNAJ PROTEIN HOMOLOG 2 (HUMAN);
8432	20972	33886	4.49	3.0E-64	BE206521.1	EST_HUMAN	bb72h12.y1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3047975 5' similar to gb:L08069 DNAJ PROTEIN HOMOLOG 2 (HUMAN);
9348	21862	34810	1.23	3.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
9348	21862	34811	1.23	3.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
9433	21959	34907	0.72	3.0E-64	AW977384.1	EST_HUMAN	EST389493 IMAGE resequences, MAGO Homo sapiens cDNA
9433	21959	34908	0.72	3.0E-64	AW977384.1	EST_HUMAN	EST389493 IMAGE resequences, MAGO Homo sapiens cDNA
11118	23627	36669	1.83	3.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
11118	23627	36670	1.83	3.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
11539	23987	37058	4.89	3.0E-64	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
1127	13730	26241	1.28	2.0E-64	AA609940.1	EST_HUMAN	af09d08.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1031151 3'
1441	14034	26562	8.3	2.0E-64	4757701	NT	Homo sapiens eIF4E-like cap-binding protein (4EHP) mRNA wc87b01.x1 NCI_CGAP_Kid111 Homo sapiens cDNA clone IMAGE:2462281 3' similar to contains element L1 repetitive element ;
2566	15130		1.88	2.0E-64	A1927030.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C046
2570	15133	27702	1.25	2.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
2570	15133	27703	1.25	2.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
3174	15787	28259	1.17	2.0E-64	4504068	NT	Homo sapiens glutamic-oxaloacetic transaminase 2, mitochondrial (aspartate aminotransferase 2) (GOT2), nuclear gene encoding mitochondrial protein, mRNA
3655	18453	28918	0.63	2.0E-64	AW958145.1	EST_HUMAN	EST370215 IMAGE resequences, MAGO Homo sapiens cDNA
3655	18453	28917	0.63	2.0E-64	AW958145.1	EST_HUMAN	EST370215 IMAGE resequences, MAGO Homo sapiens cDNA
6157	18770	31534	2.28	2.0E-64	AU124387.1	EST_HUMAN	AU124387 NT2RM2 Homo sapiens cDNA clone NT2RM2002113 5'
6389	18992	31772	1.52	2.0E-64	AF113708.1	NT	Homo sapiens angiotensin 4 (ANG4) mRNA, partial cds
6611	19208	32016	4.45	2.0E-64	BF686537.1	EST_HUMAN	602123474F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4280395 5'
6708	19301	32105	1.38	2.0E-64	AI078387.1	EST_HUMAN	602123474F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4280395 5'
6802	19383	32209	53.03	2.0E-64	M77185.1	NT	602123474F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4280395 5'
8603	21142	34055	1.98	2.0E-64	11434008	NT	H.sapiens dopamine receptor D5 pseudogene 1, partial cds
8603	21142	34056	1.98	2.0E-64	11434008	NT	Homo sapiens lymphocyte cytosolic protein 1 (L-plasin) (LCP1), mRNA
9157	21892	34636	1.14	2.0E-64	AU132570.1	EST_HUMAN	Homo sapiens lymphocyte cytosolic protein 1 (L-plasin) (LCP1), mRNA
9889	22386	35364	0.48	2.0E-64	T06397.1	EST_HUMAN	AU132570 NT2RP4 Homo sapiens cDNA clone NT2RP4000109 5'
9889	22386	35365	0.48	2.0E-64	T06397.1	EST_HUMAN	EST04288 Fetal brain, Stratagene (cat#836208) Homo sapiens cDNA clone HFBD588
10943	23175	36187	2.38	2.0E-64	BF528114.1	EST_HUMAN	EST04288 Fetal brain, Stratagene (cat#836208) Homo sapiens cDNA clone HFBD588
10929	23447	36468	5.36	2.0E-64	A1922911.1	EST_HUMAN	602042882F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4180558 5'
10929	23447	36469	5.36	2.0E-64	A1922911.1	EST_HUMAN	602042882F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4180558 5'
10929	23447	36468	5.36	2.0E-64	A1922911.1	EST_HUMAN	602042882F1 NCI_CGAP_U11 Homo sapiens cDNA clone IMAGE:2452211 3'
10929	23447	36469	5.36	2.0E-64	A1922911.1	EST_HUMAN	602042882F1 NCI_CGAP_U11 Homo sapiens cDNA clone IMAGE:2452211 3'

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11112	23622	36863	1.78	2.0E-64	AW864773.1	EST_HUMAN	PM2-SN0018-220300-002-e12 SN0018 Homo sapiens cDNA
11826	24194	31034	1.5	2.0E-64	8567387	NT	Homo sapiens period (Drosophila) homolog 3 (PER3), mRNA
12285	24487		2.44	2.0E-64	H55162.1	EST_HUMAN	CHR220101 Chromosome 22 exon Homo sapiens cDNA clone C22_132_5'
279	12936	25421	1.64	1.0E-64	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
1815	14405	26949	9.93	1.0E-64	AI929419.1	EST_HUMAN	au60c01.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2519136 3' similar to gb:L21698_cds1 PROTHYMOSIN ALPHA (HUMAN); contains element MSR1 repetitive element ;
3045	15661	28142	0.82	1.0E-64	4507334	NT	Homo sapiens synaptotagmin 1 (SYNJ1), mRNA
3561	16165	28648	5.94	1.0E-64	AF196779.1	NT	Homo sapiens transcription factor IGHM enhancer 3, JM11 protein, JM4 protein, JM5 protein, T54 protein, JM10 protein, A4 differentiation-dependent protein, triple LIM domain protein 6, and synaptophysin genes, complete cds; and L-type calcium channel alpha
3644	16247	28722	1.14	1.0E-64	AF228527.1	NT	Homo sapiens TRIAD3 mRNA, partial cds
3644	16247	28723	1.14	1.0E-64	AF228527.1	NT	Homo sapiens TRIAD3 mRNA, partial cds
3968	16566	29035	0.67	1.0E-64	8922829	NT	Homo sapiens hypothetical protein FLJ11028 (FLJ11028), mRNA
9976	22471	35454	0.84	1.0E-64	AA042975.1	EST_HUMAN	zfs3f08.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:486567 3'
11798	24178		1.37	1.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
2315	14987	27462	1.02	9.0E-65	X89211.1	NT	H sapiens DNA for endogenous retroviral like element
2315	14987	27463	1.02	9.0E-65	X89211.1	NT	H sapiens DNA for endogenous retroviral like element
11410	23961		35.81	9.0E-65	BF330676.1	EST_HUMAN	QV4-BT0257-081199-017-a03 BT0257 Homo sapiens cDNA
11383	23835	36897	14.63	8.0E-65	AI929244.1	EST_HUMAN	au58h07.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2519005 3' similar to SW:RL21_HUMAN P46778 60S RIBOSOMAL PROTEIN L21 ;
10059	22554	35550	2.06	7.0E-65	BE081653.1	EST_HUMAN	QV2-BT0635-240400-162-c02 BT0635 Homo sapiens cDNA
1094	13699	26209	1.68	6.0E-65	AV721898.1	EST_HUMAN	AV721898 HTB Homo sapiens cDNA clone HTBBZC06 5'
1966	14550		5.21	6.0E-65	AA550929.1	EST_HUMAN	n186d10.s1 NC1 CGAP_Prl11 Homo sapiens cDNA clone IMAGE:999379 similar to gb:K03002 60S RIBOSOMAL PROTEIN L32 (HUMAN);
8681	21220	34140	2.24	6.0E-65	AW083252.1	EST_HUMAN	xc07b09.x1 NC1 CGAP_Cox21 Homo sapiens cDNA clone IMAGE:2583545 3' similar to TR:Q63306 Q63306
8941	21479	34400	4.18	6.0E-65	AA427878.1	EST_HUMAN	LONG INTERSPERSED REPETITIVE DNA CONTAINING 7 ORFs ; contains L1.b2 L1 repetitive element ;
8941	21479	34401	4.18	6.0E-65	AA427878.1	EST_HUMAN	zw53b06.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:773747 3'
9004	21541	34471	1.04	6.0E-65	AI085314.1	EST_HUMAN	zw53b06.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:773747 3'
9004	21541	34472	1.04	6.0E-65	AI085314.1	EST_HUMAN	gf18h05.x1 NC1 CGAP_Brn25 Homo sapiens cDNA clone IMAGE:1750425 3'
10752	23276	36289	12.35	6.0E-65	BE567816.1	EST_HUMAN	gf18h05.x1 NC1 CGAP_Brn25 Homo sapiens cDNA clone IMAGE:1750425 3'
11135	23843	36883	1.73	6.0E-65	AW206752.1	EST_HUMAN	601340485f1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:1750425 3'
11369	23821	36883	4.4	6.0E-65	AL163210.2	NT	U1-H-B11-afq-q10-0-U1.s1 NC1 CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2722628 3'
							Homo sapiens chromosome 21 segment HS21C010

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
659	13282	25782	0.75	5.0E-65	AF084604.1	NT	Homo sapiens KE03 protein mRNA, partial cds
1397	13991	26518	1.8	5.0E-65	7881951	NT	Homo sapiens KIAA0156 gene product (KIAA0156), mRNA
1397	13991	26519	1.8	5.0E-65	7881951	NT	Homo sapiens KIAA0156 gene product (KIAA0156), mRNA
2200	14778	27349	0.87	5.0E-65	AB033768.1	NT	Homo sapiens hPAD-cclony10 mRNA for peptidylarginine deiminase type I, complete cds
3294	15905	28385	2.39	5.0E-65	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
3294	15905	28386	2.39	5.0E-65	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
10364	22858	35850	0.99	5.0E-65	AF009668.1	NT	Multiple sclerosis associated retrovirus polyprotein (pol) mRNA, partial cds
207	12868	25354	2.15	4.0E-65	AL120419.1	EST_HUMAN	DKFZp761G108_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761G108.5
775	13394	25894	1.3	4.0E-65	AI268488.1	EST_HUMAN	qm48e01.x1 Soares_placenta_8tc9weeks_2NbpHP8tc9W Homo sapiens cDNA clone IMAGE:1891800 3'
775	13394	25895	1.3	4.0E-65	AI268488.1	EST_HUMAN	qm48e01.x1 Soares_placenta_8tc9weeks_2NbpHP8tc9W Homo sapiens cDNA clone IMAGE:1891800 3'
1117	13720	26232	1.52	4.0E-65	4828735	NT	Homo sapiens fragile X mental retardation, autosomal homolog 1 (FXR1), mRNA
1533	14125	26682	17.23	4.0E-65	4508638	NT	Homo sapiens ribosomal protein L34 (RPL34) mRNA
2374	14944	27516	1.14	4.0E-65	BE221469.1	EST_HUMAN	hu25e04.x1 NC1_CGAP_Mel15 Homo sapiens cDNA clone IMAGE:3171102 3'
2374	14944	27517	1.14	4.0E-65	BE221469.1	EST_HUMAN	hu25e04.x1 NC1_CGAP_Mel15 Homo sapiens cDNA clone IMAGE:3171102 3'
6303	18910	31682	4.44	4.0E-65	AB033093.1	NT	Homo sapiens mRNA for KIAA1287 protein, partial cds
6303	18910	31683	4.44	4.0E-65	AB033093.1	NT	Homo sapiens mRNA for KIAA1287 protein, partial cds
7171	19703	32550	0.85	4.0E-65	M19879.1	NT	Homo sapiens mRNA for KIAA1287 protein, partial cds
7271	19799	32656	2.39	4.0E-65	11545780	NT	Human clabindin 27 gene, exons 10 and 11, and L1 and Alu repeats
7783	20326	33230	0.81	4.0E-65	5453785	NT	Homo sapiens hypothetical protein FLJ22087 (FLJ22087), mRNA
7783	20326	33231	0.81	4.0E-65	5453785	NT	Homo sapiens nei (chicken)-like 2 (NELL2), mRNA
9072	21809	34539	0.8	4.0E-65	11429127	NT	Homo sapiens nei (chicken)-like 2 (NELL2), mRNA
10473	22887		2.55	4.0E-65	AJ277546.2	NT	Homo sapiens Janus kinase 2 (a protein tyrosine kinase) (JAK2), mRNA
10833	23354	36389	1.93	4.0E-65	AV738764.1	EST_HUMAN	Homo sapiens WEE1 gene for protein kinase and partial ZNF143 gene for zinc finger transcription factor
10977	23492	36522	3.39	4.0E-65	AF119846.1	NT	AV738764 CB Homo sapiens cDNA clone CBCBCE05.5
12124	13720	26232	1.41	4.0E-65	4828735	NT	Homo sapiens PRO1474 mRNA, complete cds
101	12778	25261	2.51	3.0E-65	5031978	NT	Homo sapiens fragile X mental retardation, autosomal homolog 1 (FXR1), mRNA
102	12778	25261	2.35	3.0E-65	5031978	NT	Homo sapiens pre-B-cell colony-enhancing factor (PBEF) mRNA
1275	13393		11.57	3.0E-65	X78932.1	NT	Homo sapiens pre-B-cell colony-enhancing factor (PBEF) mRNA
1605	14197	26729	0.98	3.0E-65		NT	H. sapiens HZF9 mRNA for zinc finger protein
					4504628	NT	Homo sapiens immunoglobulin superfamily, member 3 (IGSF3) mRNA, and translated products
1881	14449	27007	1	3.0E-65	AI000692.1	EST_HUMAN	ov23f03.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1638173 3' similar to contains element MSR1 repetitive element;

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3019	15635	28111	0.8	3.0E-65	D87078.2	NT	Homo sapiens mRNA for KIAA0235 protein, partial cds
3315	15925	28403	0.96	3.0E-65	4504950	NT	Homo sapiens laminin, beta 1 (LAMB1), mRNA
3784	16384	28849	1.19	3.0E-65	A100692.1	EST_HUMAN	ov23f03.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1638173 3' similar to contains element MSR1 repetitive element;
4754	17335	29779	1.36	3.0E-65	6912385	NT	Homo sapiens rab6 GTPase activating protein (GAP and centrosome-associated) (GAPCENA), mRNA
9881	22476	35458	1.44	3.0E-65	BE787386.1	EST_HUMAN	601479886F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3882405 5'
11267	23005	36013	13.23	3.0E-65	AA430006.1	EST_HUMAN	zv65a06.f1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:781042 5'
3451	16058	28534	5.71	2.0E-65	BF680294.1	EST_HUMAN	602155062F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4285966 5'
6857	19253		5.63	2.0E-65	BE263373.1	EST_HUMAN	601190883F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3534741 5'
7196	19718	32565	25.57	2.0E-65	BF576922.1	EST_HUMAN	602134359F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4289295 5'
8779	21318	34241	1.21	2.0E-65	AK024463.1	NT	Homo sapiens mRNA for FLJ00056 protein, partial cds
8779	21318	34242	1.21	2.0E-65	AK024463.1	NT	Homo sapiens mRNA for FLJ00056 protein, partial cds
11750	24147		6.58	2.0E-65	AA307904.1	EST_HUMAN	EST178755 Colon carcinoma (HCC) cell line Homo sapiens cDNA 5' end similar to endogenous retrovirus
12241	24832		2.26	2.0E-65	BF246086.1	EST_HUMAN	601854033F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4073769 5'
94	12770		0.78	1.0E-65	BF125544.1	EST_HUMAN	601763488F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:4026501 5'
564	13195	25674	1.4	1.0E-65	7657495	NT	Homo sapiens putative Rab5 GDP/GTP exchange factor homologue (RABEX5), mRNA
2084	14665	27236	0.95	1.0E-65	AB040946.1	NT	Homo sapiens mRNA for KIAA1513 protein, partial cds
3419	16027	28508	0.94	1.0E-65	BE466681.1	EST_HUMAN	h224a09.x1 NCL CGAP_GC8 Homo sapiens cDNA clone IMAGE:3208888 3'
4070	16666	29127	1.85	1.0E-65	4504082	NT	Homo sapiens glycican 4 (GPC4) mRNA
4070	16666	29128	1.85	1.0E-65	4504082	NT	Homo sapiens glycican 4 (GPC4) mRNA
4285	16871	29317	2.39	1.0E-65	AW029340.1	EST_HUMAN	wx09c09.x1 NCL CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2543152 3'
4285	16871	29318	2.39	1.0E-65	AW029340.1	EST_HUMAN	wx09c09.x1 NCL CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2543152 3'
5698	18295	30775	0.74	1.0E-65	A1243738.1	EST_HUMAN	qh88h07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1854109 3' similar to TR:Q07823 Q07823 MAC30 PROTEIN;
8198	20737	33648	4.11	1.0E-65	AW820481.1	EST_HUMAN	QV2-ST0298-140200-042-f12 ST0298 Homo sapiens cDNA
8196	20737	33649	4.11	1.0E-65	AW820481.1	EST_HUMAN	QV2-ST0298-140200-042-f12 ST0298 Homo sapiens cDNA
8222	20763	33679	0.56	1.0E-65	BE732118.1	EST_HUMAN	601566124F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3841012 5'
8222	20763	33680	0.56	1.0E-65	BE732118.1	EST_HUMAN	601566124F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3841012 5'
8261	20802	33719	2.05	1.0E-65	AU141295.1	EST_HUMAN	AU141295 THYRO1 Homo sapiens cDNA clone THYRO100356 5'
8261	20802	33720	2.05	1.0E-65	AU141295.1	EST_HUMAN	AU141295 THYRO1 Homo sapiens cDNA clone THYRO100356 5'
8774	21313	34235	2.42	1.0E-65	BF698707.1	EST_HUMAN	602126239F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4283313 5'
8950	21488	34410	2.86	1.0E-65	AU129040.1	EST_HUMAN	AU129040 NT2RP2 Homo sapiens cDNA clone NT2RP2004714 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8950	21488	34411	2.86	1.0E-65	AU128040.1	EST_HUMAN	AU128040 NT2RP2 Homo sapiens cDNA clone NT2RP2004714 5'
8961	21499		2.54	1.0E-65	11431894	NT	Homo sapiens inositol 1,4,5-trisphosphate receptor, type 1 (ITPR1), mRNA
8998	21821	34770	5.09	1.0E-65	A191716.1	EST_HUMAN	q458a02.x1 Soares, testis_NHT Homo sapiens cDNA clone IMAGE:1733450 3' similar to gb:M29581 ZINC
9800	22288	35283	1.39	1.0E-65	AU153793.1	EST_HUMAN	FINGER PROTEIN 8 (HUMAN); contains MER19.11 MER19 repetitive element;
10203	22698	35692	0.65	1.0E-65	AA069559.1	EST_HUMAN	AU153793 NT2RP3 Homo sapiens cDNA clone NT2RP3004018 3'
10463	22957	35968	1.12	1.0E-65	AB037832.1	NT	z75a04.x1 Soares, pineal_gland_N3HPG Homo sapiens cDNA clone IMAGE:382734 5'
10529	23066	36078	3.58	1.0E-65	M28167.1	NT	Homo sapiens mRNA for KIAA1411 protein, partial cds
10658	23188	36204	22.3	1.0E-65	4506660	NT	Human platelet factor 4 variation 1 (PF4var1) gene, complete cds
11010	23524	36558	2.79	1.0E-65	BF698707.1	EST_HUMAN	Homo sapiens ribosomal protein L7a (RPL7A) mRNA
11088	23600	36638	2.25	1.0E-65	A1821017.1	EST_HUMAN	602128239F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:4283313 5'
11789	24179		2.28	1.0E-65	11418041	NT	ts76a08.x1 NCI_CGAP_GC08 Homo sapiens cDNA clone IMAGE:2237170 3' similar to gb:L15533_rna1
11896	24238	31005	5.17	1.0E-65	11418322	NT	PANCREATITIS ASSOCIATED PROTEIN 1 PRECURSOR (HUMAN);
75	12753	25232	4.57	9.0E-66	AL160311.1	NT	Homo sapiens TNF-inducible protein CG12-1 (CG12-1), mRNA
75	12753	25233	4.57	9.0E-66	AL160311.1	NT	Homo sapiens cadherin EGF LAG seven-pass G-type receptor 1 (CELSR1), mRNA
1398	13992	26520	1.54	9.0E-66	5031980	NT	Novel human gene mapping to chromosome 22
1398	13992	26521	1.54	9.0E-66	5031980	NT	Novel human gene mapping to chromosome 22
1531	14123		4.45	9.0E-66	M87299.1	NT	Homo sapiens 26S proteasome-associated ped1 homolog (POH1) mRNA
4802	17380	29830	0.57	9.0E-66	AL137183.1	NT	Homo sapiens 26S proteasome-associated ped1 homolog (POH1) mRNA
4801	17379	29829	0.66	8.0E-66	AA424304.1	EST_HUMAN	Human transposon-like element, partial
11225	23756		1.78	7.0E-66	BE064410.1	EST_HUMAN	Novel human gene mapping to chromosome X
4455	17041	29483	1.11	6.0E-66	A1824853.1	EST_HUMAN	z90c05.r1 Soares, NHMPRu_S1 Homo sapiens cDNA clone IMAGE:787048 5'
4455	17041	29484	1.11	6.0E-66	A1824853.1	EST_HUMAN	RC4-BT0311-141189-011-K06 BT0311 Homo sapiens cDNA
4455	17041	29485	1.11	6.0E-66	A1824853.1	EST_HUMAN	wn57h07.x1 NCI_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2449597 3' similar to WP:F15G9.4A
8373	20913		0.48	6.0E-66	BE178583.1	EST_HUMAN	CE18595;
11038	23552	36587	7.01	6.0E-66	X69181.1	NT	wn57h07.x1 NCI_CGAP_Lu18 Homo sapiens cDNA clone IMAGE:2449597 3' similar to WP:F15G9.4A
1411	14004	26532	1.25	5.0E-66	BE064410.1	EST_HUMAN	CE18595;
5278	17840	30266	0.57	5.0E-66	BE898844.1	EST_HUMAN	PM2-HT0604-030300-001-b08 HT0604 Homo sapiens cDNA
5278	17840	30267	0.57	5.0E-66	BE898844.1	EST_HUMAN	H sapiens mRNA for ribosomal protein L31
8218	21735	34877	14.1	5.0E-66	11420557	NT	RC4-BT0311-141189-011-K06 BT0311 Homo sapiens cDNA
							601681592F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3951791 5'
							601681592F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3951791 5'
							Homo sapiens thyroid hormone receptor binding protein (AIB3), mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
823	13440	25947	1.13	4.0E-66	6679816	NT	Mus musculus fragile X mental retardation syndrome 1 homolog (Fmr1), mRNA
1771	14361	26006	0.87	4.0E-66	AW897798.1	EST_HUMAN	RC1-NN0063-100500-022-a02 NN0063 Homo sapiens cDNA
2319	14891	27466	1.64	4.0E-66	X89211.1	NT	H.sapiens DNA for endogenous retroviral like element
2513	15077		2.35	4.0E-66	AJ223364.1	NT	Homo sapiens germ-line DNA upstream of Jkappa locus
4898	17473		6.76	4.0E-66	9635487	NT	Human endogenous retrovirus, complete genome
5739	18365	31072	3.33	4.0E-66	11428643	NT	Homo sapiens methylene tetrahydrofolate dehydrogenase (NAD+ dependent), methenyltetrahydrofolate cyclohydrolase (MTHFD2), mRNA
5918	18540	31266	0.9	4.0E-66	AW939119.1	EST_HUMAN	QV1-DT0069-110200-087-g10 DT0069 Homo sapiens cDNA
6940	18048	30470	4.62	4.0E-66	AW965473.1	EST_HUMAN	EST377546 MAGE resequences, MAGI Homo sapiens cDNA
7185	19717	32564	7.41	4.0E-66	U78168.1	NT	Homo sapiens cAMP-regulated guanine nucleotide exchange factor 1 (cAMP-GEFI) mRNA, complete cds
7625	18365	31072	1.05	4.0E-66	11428643	NT	Homo sapiens methylene tetrahydrofolate dehydrogenase (NAD+ dependent), methenyltetrahydrofolate cyclohydrolase (MTHFD2), mRNA
8022	20564	33466	6.44	4.0E-66	11421638	NT	Homo sapiens hypothetical protein FLJ20116 (FLJ20116), mRNA
8076	20618	33532	0.96	4.0E-66	X57147.1	NT	Human endogenous retrovirus pHE.1 (ERV9)
1473	14065	26601	11.5	3.0E-66	4502098	NT	Homo sapiens solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocator), member 5 (SLC25A5), nuclear gene encoding mitochondrial protein, mRNA
1473	14065	26602	11.5	3.0E-66	4502098	NT	Homo sapiens solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocator), member 5 (SLC25A5), nuclear gene encoding mitochondrial protein, mRNA
2026	14608	27173	1	3.0E-66	N55323.1	EST_HUMAN	yz27g12.r1 Soares_multiple_sclerosis_2NBHMS Homo sapiens cDNA clone IMAGE:284326 5' similar to SW:H2B1_TIGCA P35068 HISTONE H2B.1/H2B.2 [2] PIR-B56612 ;
2026	14608	27174	1	3.0E-66	N55323.1	EST_HUMAN	yz27g12.r1 Soares_multiple_sclerosis_2NBHMS HISTONE H2B.1/H2B.2 [2] PIR-B56612 ; SW:H2B1_TIGCA P35068 HISTONE H2B.1/H2B.2 [2] PIR-B56612 ;
2026	14608	27175	1	3.0E-66	N55323.1	EST_HUMAN	yz27g12.r1 Soares_multiple_sclerosis_2NBHMS HISTONE H2B.1/H2B.2 [2] PIR-B56612 ; SW:H2B1_TIGCA P35068 HISTONE H2B.1/H2B.2 [2] PIR-B56612 ;
2732	15287	27854	3.43	3.0E-66	11141880	NT	Homo sapiens TGF(beta)-induced transcription factor 2 (TGIF2), mRNA
3151	15765	28232	6.89	3.0E-66	7662223	NT	Homo sapiens KIAA0849 gene product (KIAA0849), mRNA
5658	18285	30763	0.9	3.0E-66	AB020699.1	NT	Homo sapiens mRNA for KIAA0892 protein, partial cds
5946	18566	31296	2.07	3.0E-66	11417946	NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1), mRNA
5946	18566	31297	2.07	3.0E-66	11417946	NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1), mRNA
9444	21970	34919	0.59	3.0E-66	AK024453.1	NT	Homo sapiens mRNA for FLJ00045 protein, partial cds
9635	22135	35100	0.88	3.0E-66	11417118	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
8985	22480	35464	0.8	3.0E-66	7019480	NT	Homo sapiens protocadherin beta 1 (PCDH-beta1), mRNA
10415	22909	35908	0.92	3.0E-66	AF155659.1	NT	Homo sapiens molybdenum cofactor biosynthesis protein E (MCBPPE) mRNA, complete cds



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11384	23838	38988	9.34	3.0E-66	5453949	NT	Homo sapiens protein phosphatase 2, regulatory subunit B (B56), alpha isoform (PPP2R5A) mRNA
55	12735	25203	1.34	2.0E-66	7657334	NT	Homo sapiens Misschappen/NIK-related kinase (MINK), mRNA
55	12735	25204	1.34	2.0E-66	7657334	NT	Homo sapiens Misschappen/NIK-related kinase (MINK), mRNA
447	12676	25132	1.21	2.0E-66	4505524	NT	Homo sapiens origin recognition complex, subunit 5 (yeast homolog)-like (ORC5L) mRNA, and translated products
447	12676	25133	1.21	2.0E-66	4505524	NT	Homo sapiens origin recognition complex, subunit 5 (yeast homolog)-like (ORC5L) mRNA, and translated products
1866	14452	27011	1.73	2.0E-66	AL163301.2	NT	Homo sapiens chromosome 21 segment HS21C101
3002	15618	28066	1.55	2.0E-66	X65859.1	NT	H sapiens pseudogene for the low affinity IL-8 receptor
3572	16176	28658	0.97	2.0E-66	8923280	NT	Homo sapiens hypothetical protein FLJ20309 (FLJ20309), mRNA
3828	16428	28889	0.72	2.0E-66	AL117233.1	NT	Novel human gene mapping to chromosome 1
4139	16731	29184	0.57	2.0E-66	AF106389.1	NT	Homo sapiens sodium/calcium exchanger isoform NaCa3 (NCX1) mRNA, complete cds
4760	17341	29788	16.35	2.0E-66	AJ133267.2	NT	Homo sapiens HLA-B gene for human leucocyte antigen B
4760	17341	29789	16.35	2.0E-66	AJ133267.2	NT	Homo sapiens HLA-B gene for human leucocyte antigen B
5982	18602	31336	0.8	2.0E-66	AW968854.1	EST_HUMAN	Homo sapiens HLA-B gene for human leucocyte antigen B
5982	18602	31337	0.8	2.0E-66	AW968854.1	EST_HUMAN	EST380930 MAGI resequences, MAGI Homo sapiens cDNA
8781	21320	34244	2.24	2.0E-66	N45480.1	EST_HUMAN	EST380930 MAGI resequences, MAGI Homo sapiens cDNA
12132	25057		1.8	2.0E-66	11418318	NT	Y59c02.1 Soares_multiple_sclerosis_2NbhMSP Homo sapiens cDNA clone IMAGE:277826 5'
2919	15536	28010	1.65	1.0E-66	AV717817.1	EST_HUMAN	Homo sapiens G-2 and S-phase expressed 1 (GTSE1), mRNA
2919	15536	28011	1.65	1.0E-66	AV717817.1	EST_HUMAN	AV717817 DCB Homo sapiens cDNA clone DCBADC07 5'
4474	15536	28010	3.57	1.0E-66	AV717817.1	EST_HUMAN	AV717817 DCB Homo sapiens cDNA clone DCBADC07 5'
4474	15536	28011	3.57	1.0E-66	AV717817.1	EST_HUMAN	AV717817 DCB Homo sapiens cDNA clone DCBADC07 5'
5583	18214	30663	5.46	1.0E-66	BF673088.1	EST_HUMAN	602152968F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4284151 5'
5952	18574	31307	0.68	1.0E-66	BE765232.1	EST_HUMAN	IL2-NT0101-280700-118-E04 NT0101 Homo sapiens cDNA
5952	18574	31308	0.68	1.0E-66	BE765232.1	EST_HUMAN	IL2-NT0101-280700-118-E04 NT0101 Homo sapiens cDNA
7018	19516	32338	0.95	1.0E-66	BF328623.1	EST_HUMAN	RC5-EN0193-010900-034-G06 BN0193 Homo sapiens cDNA
8395	20935	33857	1.6	1.0E-66	AA668858.1	EST_HUMAN	aa80904.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:827262 3'
9347	21861	34809	0.74	1.0E-66	AA018928.1	EST_HUMAN	ze57e12.1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:363118 5'
10273	22768	35756	0.75	1.0E-66	AV748749.1	EST_HUMAN	AV748749 NPC Homo sapiens cDNA clone NPCBVA05 5'
10273	22768	35757	0.75	1.0E-66	AV748749.1	EST_HUMAN	AV748749 NPC Homo sapiens cDNA clone NPCBVA05 5'
10509	23003	36011	0.51	1.0E-66	BE044595.1	EST_HUMAN	ht047h02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:3040563 3'
10821	23342	36357	1.96	1.0E-66	AF111167.2	NT	Homo sapiens jun dimerization protein gene, partial cds; cfos gene, complete cds; and unknown gene

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11901	24240		3	9.0E-67	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
403	13078	25570	3.59	7.0E-67	AW162232.1	EST_HUMAN	au75d02.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782083 3' similar to gb:M37104 ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
1425	14018	26547	1.75	7.0E-67	AA383416.1	EST_HUMAN	EST168812 Testis 1 Homo sapiens cDNA 5' and similar to C. elegans hypothetical protein, cosmid ZK353
1601	14193	26724	1.25	7.0E-67	W85947.1	EST_HUMAN	zh56b05.r1 Soares fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:416049 5'
1601	14193	26725	1.25	7.0E-67	W85947.1	EST_HUMAN	zh56b05.r1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:416049 5'
2836	13078	25570	3.15	7.0E-67	AW162232.1	EST_HUMAN	au75d02.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782083 3' similar to gb:M37104 ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
6231	18840	31612	0.98	7.0E-67	10180895	NT	Homo sapiens zinc finger protein 304 (ZNF304), mRNA
6416	19019	31802	1.79	7.0E-67	11425572	NT	Homo sapiens adaptor-related protein complex 2, beta 1 subunit (AP2B1), mRNA
8416	19019	31803	1.79	7.0E-67	11425572	NT	Homo sapiens adaptor-related protein complex 2, beta 1 subunit (AP2B1), mRNA
6823	19413	32230	1.03	7.0E-67	4885084	NT	Homo sapiens ATPase, H+ transporting, lysosomal (vacuolar proton pump) non-catalytic accessory protein 1A (110116kD) (ATP6N1A), mRNA
7627	20139	33018	0.99	7.0E-67	11419212	NT	Homo sapiens mitochondrial carrier family protein (LOC555972), mRNA
7627	20139	33019	0.99	7.0E-67	11419212	NT	Homo sapiens mitochondrial carrier family protein (LOC555972), mRNA
8012	20554	33457	0.49	7.0E-67	4826895	NT	Homo sapiens phosphodiesterase 1/nucleotide pyrophosphatase 3 (PDNP3) mRNA
8265	20806	33724	0.8	7.0E-67	4557732	NT	Homo sapiens latent transforming growth factor beta binding protein 2 (LTBP2) mRNA
8862	21401	34328	0.76	7.0E-67	10835044	NT	Homo sapiens retinaldehyde dehydrogenase 2 (RALDH2), mRNA
11525	23973	37043	2.92	7.0E-67	U82486.1	NT	Human cytochrome oxidase subunit VIa (COX6A1P) pseudogene, complete cds
11675	24094	37147	2.95	7.0E-67	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
11675	24094	37148	2.95	7.0E-67	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
12159	24399	30978	1.44	7.0E-67	AB011396.1	NT	Homo sapiens gene for AF-6, complete cds
585	13215	25892	1.84	6.0E-67	X68668.1	NT	H. sapiens mRNA for acetyl-CoA carboxylase
828	13445	25952	1.64	6.0E-67	Z17227.1	NT	Homo sapiens mRNA for transmembrane receptor protein
1316	13910	26430	1.2	6.0E-67	Y14320.1	NT	Homo sapiens PMP69 gene, exons 3, 4, 5, 6 & 7
3485	16090	28562	1.47	6.0E-67	4507332	NT	Homo sapiens Synapsin III (SYN3) mRNA, and translated products
3485	16090	28563	1.47	6.0E-67	4507332	NT	Homo sapiens Synapsin III (SYN3) mRNA, and translated products
4205	16794	29240	0.74	6.0E-67	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
4205	16794	29241	0.74	6.0E-67	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
4815	17393	28845	3.86	6.0E-67	7657020	NT	Homo sapiens DKFZp434P211 protein (DKFZP434P211), mRNA
4815	17393	28846	3.86	6.0E-67	7657020	NT	Homo sapiens DKFZp434P211 protein (DKFZP434P211), mRNA
3758	15970	28350	2.65	5.0E-67	AF009680.1	NT	Homo sapiens T cell receptor beta locus, TCRBV7S3A2 to TCRBV12S2 region
10863	23384		1.9	5.0E-67	BE010038.1	EST_HUMAN	PM3-BN0178-100400-001-g04 BN0178 Homo sapiens cDNA

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1373	13987	28494	1.18	4.0E-67	R00819.1	EST_HUMAN	Yn02d11.1 Soares adult brain N2b4HB5SY Homo sapiens cDNA clone IMAGE:187253 5'
7964	20506	33413	0.68	4.0E-67	A1733032.1	EST_HUMAN	Q128c05.x5 NCI_CGAP_K1d3 Homo sapiens cDNA clone IMAGE:1493288 3' similar to SW:Z33A_HUMAN
8322	20863		1.3	4.0E-67	BF357321.1	EST_HUMAN	Q06730 ZINC FINGER PROTEIN 33A ;
10942	23458		1.92	4.0E-67	AA714294.1	EST_HUMAN	R00-HT0934-150900-028-c03 HT0934 Homo sapiens cDNA
2839	13284	25765	5.7	3.0E-67	AA333788.1	EST_HUMAN	hw06a01.s1 NCI_CGAP_SS1 Homo sapiens cDNA clone IMAGE:1238472 3' similar to TR:O10385 O10385
4804	17392	29832	3.38	3.0E-67	AW869159.1	EST_HUMAN	PRO-POL-DUTPASE POLYPROTEIN ;
4831	17409		0.93	3.0E-67	AL163279.2	NT	EST37903 Embryo, 9 week Homo sapiens cDNA 5' end
							MR3-SN0068-040500-008-101 SN0068 Homo sapiens cDNA
8122	20663	33573	1.17	3.0E-67	BF196068.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C079
11139	23847		22.61	3.0E-67	AA827874.1	EST_HUMAN	h81105.x1 NCI_CGAP_K1d11 Homo sapiens cDNA clone IMAGE:3134913 3' similar to SW:RHOP_MOUSE
201	12862	25348	1.74	2.0E-67	BE348354.1	EST_HUMAN	Q61085 GTP-RHO BINDING PROTEIN 1 ;
878	13492	26010	4.89	2.0E-67	AW816405.1	EST_HUMAN	cm18b07.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1541385 3'
1144	13747		1.94	2.0E-67	AF167460.1	NT	hw16g09.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3183136 3' similar to WP:F23H11.9
1928	14512	27069	1.5	2.0E-67	BE303037.1	EST_HUMAN	CE09817 ;
1928	14512	27070	1.5	2.0E-67	BE303037.1	EST_HUMAN	QV4-ST0234-181199-037-05 ST0234 Homo sapiens cDNA
2428	14995	27570	2.84	2.0E-67	AF309561.1	NT	Homo sapiens double stranded RNA activated protein kinase (PKR) gene, exons 2a, 2, 3, and 4
2475	15042	27610	0.95	2.0E-67	4758795	NT	ba72g05.y1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2905976 5' similar to TR:O94892 O94892
3514	16119	28599	4.46	2.0E-67	AA625755.1	EST_HUMAN	KIAA0798 PROTEIN ;
4074	16870	29131	2.78	2.0E-67	AL163300.2	NT	ba72g05.y1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2905976 5' similar to TR:O94892 O94892
6222	18831	31605	0.83	2.0E-67	AL049784.1	NT	KIAA0798 PROTEIN ;
6273	18881	31649	5.18	2.0E-67	BF240758.1	EST_HUMAN	Homo sapiens KRAB zinc finger protein ZFQR mRNA, complete cds
6438	19040	31827	2.25	2.0E-67	AB051763.1	NT	Homo sapiens developmentally regulated GTP-binding protein 1 (DRG1), mRNA
6438	19040	31828	2.25	2.0E-67	AB051763.1	NT	z181g01.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:745392 3'
8463	21032	33952	0.96	2.0E-67	AA334609.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C100
8463	21032	33953	0.96	2.0E-67	AA334609.1	EST_HUMAN	Novel human gene mapping to chromosome 13
8927	21485	34381	1.09	2.0E-67	AW602635.1	EST_HUMAN	601875351F1 NIH_MGC_35 Homo sapiens cDNA clone IMAGE:4091893 5'
8927	21485	34382	1.09	2.0E-67	AW602635.1	EST_HUMAN	Homo sapiens mRNA for NADPH-cytochrome P-450 reductase, complete cds
9486	21943	34890	1.24	2.0E-67	AV731333.1	EST_HUMAN	Homo sapiens mRNA for NADPH-cytochrome P-450 reductase, complete cds
9625	22125	35089	1.19	2.0E-67	AW293624.1	EST_HUMAN	EST38850 Embryo, 9 week Homo sapiens cDNA 5' end similar to similar to cerebellin
							EST38850 Embryo, 9 week Homo sapiens cDNA 5' end similar to similar to cerebellin
							RC4-BT0566-170100-011-c07 BT0566 Homo sapiens cDNA
							RC4-BT0566-170100-011-c07 BT0566 Homo sapiens cDNA
							AV731333 HTF Homo sapiens cDNA clone HTFARD03 5'
							U1H-B12-ahn-10-0-U1.s1 NCI_CGAP_Sub4 Homo sapiens cDNA clone IMAGE:2727283 3'

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10781	23305	36313	1.57	2.0E-67	BF685788.1	EST_HUMAN	602140470F1 NIH_MGC_46 Homo sapiens cDNA clone IMAGE:4301705 5'
10934	25127		3.62	2.0E-67	11436448	NT	Homo sapiens KIAA0985 protein (KIAA0985), mRNA
11107	23617	36659	1.85	2.0E-67	BE285714.1	EST_HUMAN	601175762F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3531038 5'
11330	23028	36037	2.01	2.0E-67	BF377169.1	EST_HUMAN	PM2-TN0103-040900-001-c02 TN0103 Homo sapiens cDNA
12034	24911	30714	2.53	2.0E-67	11418189	NT	Homo sapiens thyroid autoantigen 70kD (Ku antigen) (G22P1), mRNA
12347	24528	30925	2.26	2.0E-67	11417877	NT	Homo sapiens gamma-glutamyltransferase 1 (GGT1), mRNA
274	12831	25418	3.31	1.0E-67	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
737	13357	25851	1.2	1.0E-67	AA702794.1	EST_HUMAN	zfg0b04.s1 Soares fetal_liver spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:448015 3'
2220	14795	27388	1.73	8.0E-68	BE870732.1	EST_HUMAN	601448558F1 NIH_MGC_85 Homo sapiens cDNA clone IMAGE:3852254 5'
3937	16535	29001	5.37	8.0E-68	AA209456.1	EST_HUMAN	zq82h10.r1 Strategene hNT neuron (#937233) Homo sapiens cDNA clone IMAGE:648163 5' similar to SW:SAV_SULAC Q07590 SAV PROTEIN.1
3937	16535	29002	5.37	8.0E-68	AA209456.1	EST_HUMAN	zq82h10.r1 Strategene hNT neuron (#937233) Homo sapiens cDNA clone IMAGE:648163 5' similar to SW:SAV_SULAC Q07590 SAV PROTEIN.1
8045	20587	33493	0.53	7.0E-68	A1810505.1	EST_HUMAN	wb89e03.x1 NCL_CGAP_P128 Homo sapiens cDNA clone IMAGE:2312860 3'
10346	22840	35836	2.53	6.0E-68	11422086	NT	Homo sapiens Brefeldin A-inhibited guanine nucleotide-exchange protein 2 (BIG2), mRNA
12349	24530		3.32	6.0E-68	BE612554.1	EST_HUMAN	601452087F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3855761 5'
835	13389	25960	0.67	5.0E-68	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
835	13389	25961	0.67	5.0E-68	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
852	13468	25977	4.54	5.0E-68	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
852	13468	25978	4.54	5.0E-68	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
2808	15360	27927	72.53	5.0E-68	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
3181	15794	28266	3.22	5.0E-68	AB037852.1	NT	Homo sapiens mRNA for KIAA1431 protein, partial cds
4260	16846		0.63	5.0E-68	4826967	NT	Homo sapiens retinoblastoma-binding protein 2 (RBBP2) mRNA
4590	17173	28618	1.21	5.0E-68	AL157645.1	EST_HUMAN	DKFZ547D207.1 547 (synonym: hfb1) Homo sapiens cDNA clone DKFZ547D207 5'
5111	17683		8.62	4.0E-68	P04406	SWISSPROT	GLYCERALDEHYDE 3-PHOSPHATE DEHYDROGENASE, LIVER
6118	18734	31487	0.76	4.0E-68	AF157063.1	NT	Homo sapiens sedlin (SEDL) gene, exon 4
6870	19604	32437	6.01	4.0E-68	11055991	NT	Homo sapiens serine carboxypeptidase 1 precursor protein (HSCP1), mRNA
6870	19604	32438	6.01	4.0E-68	11055991	NT	Homo sapiens serine carboxypeptidase 1 precursor protein (HSCP1), mRNA
7674	20185	33073	0.92	4.0E-68	7861883	NT	Homo sapiens DKFZP586L0724 protein (DKFZP586L0724), mRNA
8970	21508	34429	5.04	4.0E-68	D63479.2	NT	Homo sapiens mRNA for KIAA0145 protein, partial cds
8970	21508	34430	5.04	4.0E-68	D63479.2	NT	Homo sapiens mRNA for KIAA0145 protein, partial cds
9106	21642	34582	2.9	4.0E-68	AB040918.1	NT	Homo sapiens mRNA for KIAA1485 protein, partial cds
10882	23403	36420	5.14	4.0E-68	4506282	NT	Homo sapiens protein tyrosine phosphatase type IVA, member 1 (PTP4A1) mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10882	23403	38421	5.14	4.0E-68	4506282	NT	Homo sapiens protein tyrosine phosphatase type IVA, member 1 (PTP4A1) mRNA
12225	24446	30953	2.91	4.0E-68	11417968	NT	Homo sapiens SEC14 (S. cerevisiae)-like 2 (SEC14L2), mRNA
3722	16323	28780	2.56	3.0E-68	AF236082.1	NT	Mus musculus G-protein coupled receptor GPR73 (Gpr73) mRNA, complete cds
8378	20317		6.15	3.0E-68	A1342323.1	EST_HUMAN	qt38h02.x1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1950281 3' similar to contains THR12 THR repetitive element ;
10398	22890	35884	1.77	3.0E-68	F28784.1	EST_HUMAN	HSPD18178 HM3 Homo sapiens cDNA clone s3000023D09
12571	24829		2.05	3.0E-68	AW939485.1	EST_HUMAN	QV1-DT0072-010200-056-H08 DT0072 Homo sapiens cDNA
2887	19011		27.71	2.0E-68	D00522.1	NT	Cricetulus longicaudatus mRNA for EF-1 alpha, complete cds
4087	16692	29149	0.78	2.0E-68	BE675766.1	EST_HUMAN	715f02.x1 NCI_CGAP_CLL1 Homo sapiens cDNA clone IMAGE:3294747 3' similar to TR:O80828 O80828 HYPOTHETICAL 88.8 KD PROTEIN ;
4789	17369	29821	1.56	2.0E-68	AB008681.1	NT	Homo sapiens gene for activin receptor type IIB, complete cds
8657	19534		8.68	2.0E-68	R45088.1	EST_HUMAN	Y938g04.s1 Soares Infant brain 1N1B Homo sapiens cDNA clone IMAGE:34886 3'
7123	19463	32280	4.61	2.0E-68	BF035316.1	EST_HUMAN	601458314F1 NIH_MGC 68 Homo sapiens cDNA clone IMAGE:3862034 5'
8878	21417	34341	0.84	2.0E-68	Q05859	SWISSPROT	FORMIN 4 (LMB DEFORMITY PROTEIN)
10494	22688	35996	0.46	2.0E-68	N78483.1	EST_HUMAN	Y278d07.r1 Soares multiple sclerosis 2NbhMSP Homo sapiens cDNA clone IMAGE:289165 5'
11782	25077		2.11	2.0E-68	BE897376.1	EST_HUMAN	601437367F1 NIH_MGC 72 Homo sapiens cDNA clone IMAGE:3922192 5'
12639	24714		1.84	2.0E-68	AW016803.1	EST_HUMAN	UI-H-B10-aam-b-05-0-U1.s1 NCI_CGAP_Sub1 Homo sapiens cDNA clone IMAGE:2709824 3'
83	12759	25242	0.78	1.0E-68	4505222	NT	Homo sapiens meningioma (disrupted in balanced translocation) 1 (MN1), mRNA
318	12972	25461	12.22	1.0E-68	AW816405.1	EST_HUMAN	QV4-S10234-181199-037-f05 S10234 Homo sapiens cDNA
2294	14868	27443	0.89	1.0E-68	AB011149.1	NT	Homo sapiens mRNA for KIAA0577 protein, complete cds
2294	14868	27444	0.89	1.0E-68	AB011149.1	NT	Homo sapiens mRNA for KIAA0577 protein, complete cds
2785	15338	27909	1.12	1.0E-68	AW451632.1	EST_HUMAN	UI-H-B13-alk-f-01-Q-U1.s1 NCI_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:2737272 3'
5178	17745	30174	0.66	1.0E-68	AA897343.1	EST_HUMAN	al47g12.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1460518 3'
5233	17797	30215	0.88	1.0E-68	BE296032.1	EST_HUMAN	601177002F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3532344 5'
5525	18157	30572	1.51	1.0E-68	7662349	NT	Homo sapiens cell recognition molecule Caspr2 (KIAA0869), mRNA
10085	22580	35573	0.49	1.0E-68	11419429	NT	Homo sapiens similar to ectonucleotide pyrophosphatase/phosphodiesterase 3 (H. sapiens) (LOC63214), mRNA
10732	23258	36274	2.83	1.0E-68	11418869	NT	Homo sapiens phosphodiesterase 7B (PDE7B), mRNA
10732	23258	36275	2.83	1.0E-68	11418869	NT	Homo sapiens phosphodiesterase 7B (PDE7B), mRNA
10763	23307	36314	3.41	1.0E-68	L76416.1	NT	Homo sapiens MIF2 suppressor (HSMIT3) mRNA, complete cds
11072	23364	36625	1.72	1.0E-68	11433277	NT	Homo sapiens myosin IC (MYO1C), mRNA
11179	23685	36731	2.23	1.0E-68	U50319.1	NT	Human protein kinase C substrate 80K-H (PRKCSH) gene, exon 4-5
11179	23685	36732	2.23	1.0E-68	U50319.1	NT	Human protein kinase C substrate 80K-H (PRKCSH) gene, exon 4-5
11517	23965	37036	2.1	1.0E-68	11418431	NT	Homo sapiens CGI-78 protein (LOC51632), mRNA

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11517	23865	37037	2.1	1.0E-68	11418431	NT	Homo sapiens CGI-76 protein (LOC51632), mRNA
12330	12759	25242	2.37	1.0E-68	4505222	NT	Homo sapiens meningioma (disrupted in balanced translocation) 1 (MNI), mRNA
12818	24697		1.62	1.0E-68	11418213	NT	Homo sapiens ADP-ribosylation factor GTPase activating protein 1 (ARFGAP1), mRNA
23	12702	25158	13.45	9.0E-69	5031976	NT	Homo sapiens pre-B-cell colony-enhancing factor (PBEF), mRNA
23	12702	25159	13.45	9.0E-69	5031976	NT	Homo sapiens pre-B-cell colony-enhancing factor (PBEF), mRNA
1065	13670	26180	1.44	9.0E-69	5031980	NT	Homo sapiens 26S proteasome-associated pad1 homolog (POH1), mRNA
1065	13670	26181	1.44	9.0E-69	5031980	NT	Homo sapiens 26S proteasome-associated pad1 homolog (POH1), mRNA
4208	16797	28245	0.69	9.0E-69	4757867	NT	Homo sapiens v-ref murine sarcoma viral oncogene homolog B1 (BRAF), mRNA
5384	17943	30356	0.9	9.0E-69	AF057177.1	NT	Homo sapiens T-cell receptor gamma V1 gene region
10769	23293		11.7	9.0E-69	AU117241.1	EST_HUMAN	AU117241 HEMBA1 Homo sapiens cDNA clone HEMBA1000968 5'
3433	16041		1.56	8.0E-69	AJ237744.1	NT	Homo sapiens RIBIR, gene (partial), exon 12
6493	19094	31878	5.18	7.0E-69	9988912	NT	Homo sapiens actin-related protein 3-beta (ARP3BETA), mRNA
7804	20347	33254	22.34	6.0E-69	A192784.1	EST_HUMAN	q62101.x1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1743601 3' similar to gb.L11568 60S RIBOSOMAL PROTEIN L18 (HUMAN);
7804	20347	33255	22.34	6.0E-69	A192784.1	EST_HUMAN	q62101.x1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1743601 3' similar to gb.L11568 60S RIBOSOMAL PROTEIN L18 (HUMAN);
8904	21442	34365	0.98	5.0E-69	AA826039.1	EST_HUMAN	cd60a03.s1 NCI_CGAP_GCBT Homo sapiens cDNA clone IMAGE:1372300 3'
546	13177		1.07	4.0E-69	A1873630.1	EST_HUMAN	wm28h11.x1 NCI_CGAP_U14 Homo sapiens cDNA clone IMAGE:2437125 3'
5934	24751	31283	1.56	4.0E-69	BE561063.1	EST_HUMAN	601344705F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3677641 5'
6009	18629	31364	4.7	4.0E-69	A1764973.1	EST_HUMAN	wh57b06.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2384819 3' similar to TR:O55137 O55137 ACYL-COA THIOESTERASE
6739	19333	32139	2.45	4.0E-69	4557732	NT	Homo sapiens latent transforming growth factor beta binding protein 2 (LTBP2), mRNA
6739	19333	32140	2.45	4.0E-69	4557732	NT	Homo sapiens latent transforming growth factor beta binding protein 2 (LTBP2), mRNA
8845	21384	34309	0.59	4.0E-69	AU119834.1	EST_HUMAN	AU119834 HEMBA1 Homo sapiens cDNA clone HEMBA1008283 5'
12663	24733		2.96	4.0E-69	A1187952.1	EST_HUMAN	q61305.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1738881 3'
409	13084	25577	4.92	3.0E-69	BE258012.1	EST_HUMAN	601110371F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3351352 5'
640	13263	25739	2.24	3.0E-69	AF221712.1	NT	Homo sapiens Smad- and Off-interacting zinc finger protein mRNA, partial cds
1602	14194		1.13	3.0E-69	T80514.1	EST_HUMAN	y608a02.11 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:24880 5' similar to SP:A48836 A48836 SPEGF III=EGF REPEAT-CONTAINING FIBROPELIN-LIKE PROTEIN - SEA URCHIN;
2415	14983		1.34	3.0E-69	5729910	NT	Homo sapiens lymphatic vessel endothelial hyaluronan receptor 1 (LYVE-1), mRNA
4888	17270		0.77	3.0E-69	T86234.1	EST_HUMAN	y648104.11 Soares fetal liver spleen 1N1LS Homo sapiens cDNA clone IMAGE:121015 5'
5407	17270		0.61	3.0E-69	T86234.1	EST_HUMAN	y648104.11 Soares fetal liver spleen 1N1LS Homo sapiens cDNA clone IMAGE:121015 5'
5452	18021	37141	1.37	3.0E-69	11418186	NT	Homo sapiens acetylase 2, mitochondrial (ACO2), mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6894	19628		0.99	3.0E-69	AJ277557.1	NT	Homo sapiens dNT-2 gene for mitochondrial 5'(3)-deoxyribonucleotidase (dNT-2 gene), exons 1-5
7407	19932	32796	0.87	3.0E-69	AF095703.1	NT	Homo sapiens short chain L-3-hydroxyacyl-CoA dehydrogenase precursor (HADHSC) gene, nuclear gene encoding mitochondrial protein, complete cds
7449	19973	32840	1.42	3.0E-69	U52351.1	NT	Homo sapiens arm-repeat protein NPRAP/neurojuncin (CTNND2) mRNA, partial cds
7554	20073	32949	7.75	3.0E-69	AF268075.1	NT	Homo sapiens TRAF6-binding protein T6BP mRNA, complete cds
8313	20854	33780	0.87	3.0E-69	AW139848.1	EST_HUMAN	UI-H-BIT-actw-g-01-Q-UI s1 NCI CGAP Sub3 Homo sapiens cDNA clone IMAGE:2715940 3'
8703	21242		1.8	3.0E-69	AA376399.1	EST_HUMAN	EST88807 HSC172 cells II Homo sapiens cDNA 5' and similar to similar to ribosomal protein S18
8907	21445	34367	0.5	3.0E-69	8923248	NT	Homo sapiens hypothetical protein FLJ20275 (FLJ20275), mRNA
9334	21848	34797	1.77	3.0E-69	X13223.1	NT	H. sapiens mRNA for N-acetylglucosamide-(beta 1-4)-galactosyltransferase
9452	21978	34930	8.92	3.0E-69	X06233.1	NT	Human mRNA for calcium-binding protein in macrophages (MRP-14) macrophage migration inhibitory factor (MIF)-related protein
9743	22241	35222	0.55	3.0E-69	5730039	NT	Homo sapiens SEC10 (S. cerevisiae)-like 1 (SEC10L1), mRNA
10520	23058	36068	3.93	3.0E-69	11432120	NT	Homo sapiens ribosomal protein S15a (RPS15A), mRNA
10721	23249		12.34	3.0E-69	AA376399.1	EST_HUMAN	EST88807 HSC172 cells II Homo sapiens cDNA 5' end similar to similar to ribosomal protein S18
11813	24185		3.86	3.0E-69	11419157	NT	Homo sapiens HGC6.2 protein (HGC6.2), mRNA
134	13062	25558	1.07	2.0E-69	AF160252.1	NT	Homo sapiens KIAA0553 protein gene, complete cds; and alphasib protein gene, partial cds
134	13062	25557	1.07	2.0E-69	AF160252.1	NT	Homo sapiens KIAA0553 protein gene, complete cds; and alphasib protein gene, partial cds
429	13062	25556	5.07	2.0E-69	AF160252.1	NT	Homo sapiens KIAA0553 protein gene, complete cds; and alphasib protein gene, partial cds
429	13062	25557	5.07	2.0E-69	AF160252.1	NT	Homo sapiens KIAA0553 protein gene, complete cds; and alphasib protein gene, partial cds
1929	14513	27071	1.46	2.0E-69	BE257857.1	EST_HUMAN	601109444F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3350074 5'
2869	15487		2.88	2.0E-69	AA431157.1	EST_HUMAN	zw71g02.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:781682 5'
8489	21028	33946	0.82	2.0E-69	AA114270.1	EST_HUMAN	zn28g01.r1 Stratagene pancreas (#637208) Homo sapiens cDNA clone IMAGE:527088 5'
1740	14330	26874	1.89	1.0E-69	AF053788.1	NT	Rattus norvegicus brain specific cortactin-binding protein CBP90 mRNA, partial cds
5173	17740		0.58	1.0E-69	BE409094.1	EST_HUMAN	601301284F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635781 5'
6201	18811	31580	0.76	1.0E-69	BE902501.1	EST_HUMAN	601675788F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3958532 5'
6201	18811	31581	0.76	1.0E-69	BE902501.1	EST_HUMAN	601675788F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3958532 5'
6717	19311	32114	4.38	1.0E-69	AW393969.1	EST_HUMAN	QV0-TT0010-031199-045-c07 TT0010 Homo sapiens cDNA
6908	18842	32478	1.4	1.0E-69	7662263	NT	Homo sapiens KIAA0716 gene product (KIAA0716), mRNA
6908	18842	32479	1.4	1.0E-69	7662263	NT	Homo sapiens KIAA0716 gene product (KIAA0716), mRNA
6924	19583	32412	3.33	1.0E-69	AB032973.1	NT	Homo sapiens mRNA for KIAA1147 protein, partial cds
6924	19583	32413	3.33	1.0E-69	AB032973.1	NT	Homo sapiens mRNA for KIAA1147 protein, partial cds
10077	22572	35566	5.1	1.0E-69	BE245070.1	EST_HUMAN	TCBAP1E2078 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP2878

Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10077	22572	35567	5.1	1.0E-69	BE245070.1	EST_HUMAN	TCBAP1E2678 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP2678
10169	22864	35859	1.41	1.0E-69	AB014607.1	NT	Homo sapiens mRNA for KIAA0707 protein, partial cds
10313	22807	35799	0.47	1.0E-69	BF528428.1	EST_HUMAN	602043782F1 NCI_CGAP_Bn67 Homo sapiens cDNA clone IMAGE:4181325 5'
10751	23275		14.22	1.0E-69	4504918	NT	Homo sapiens keratin 8 (KRT8) mRNA
11745	24144	36768	1.61	1.0E-69	BF125887.1	EST_HUMAN	601762802F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:4025785 5'
12169	24408		4.69	1.0E-69	AI809994.1	EST_HUMAN	wf64e08.x1 Soares NFL_T_GBC S1 Homo sapiens cDNA clone IMAGE:2360390 3' similar to contains Alu repetitive element; contains element MIR repetitive element ;
2370	15464	27513	1.52	8.0E-70	AA230303.1	EST_HUMAN	nc13412.1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:1008023
4463	17049	29493	1.81	8.0E-70	L77566.1	NT	Homo sapiens DGS-1 mRNA, 3' end
1849	14437	26993	1.65	7.0E-70	AI497807.1	EST_HUMAN	bm89f01.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2165305 3'
1849	14437	26994	1.65	7.0E-70	AI497807.1	EST_HUMAN	bm89f01.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2165305 3'
1974	14558	27115	1.64	7.0E-70	AA282855.1	EST_HUMAN	z15h04.1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:713239 5'
2109	14687		3.14	7.0E-70	5031688	NT	Homo sapiens tumor suppressor deleted in oral cancer-related 1 (DOC-1R) mRNA
4309	16895	28339	4.83	7.0E-70	4757723	NT	Homo sapiens adenylate cyclase 3 (ADCY3) mRNA
5874	18301	30782	5.56	7.0E-70	AB032369.1	NT	Homo sapiens MIST mRNA, partial cds
5874	18301	30783	5.56	7.0E-70	AB032369.1	NT	Homo sapiens MIST mRNA, partial cds
7004	19502	32321	3.22	7.0E-70	AJ000032.1	NT	Homo sapiens gene encoding splicing factor SF1, exons 2-8
7745	20253	33147	0.67	7.0E-70	11417306	NT	Homo sapiens titin immunoglobulin domain protein (myotilin) (TTID), mRNA
8370	20910	33828	2.67	7.0E-70	AB037715.1	NT	Homo sapiens mRNA for KIAA1294 protein, partial cds
8370	20910	33830	2.67	7.0E-70	AB037715.1	NT	Homo sapiens mRNA for KIAA1294 protein, partial cds
8656	21195	34114	3.59	7.0E-70	M74099.1	NT	Human displacement protein (CCAT) mRNA
8656	21195	34115	3.59	7.0E-70	M74099.1	NT	Human displacement protein (CCAT) mRNA
9084	21620	34555	3.98	7.0E-70	X59841.1	NT	Human PBX3 mRNA
9084	21620	34556	3.99	7.0E-70	X59841.1	NT	Human PBX3 mRNA
9356	20295	33194	3.84	7.0E-70	AF153715.1	NT	Homo sapiens phospholipid scramblase 1 gene, exon 1 and 5' flanking region
9382	20320	33223	2.01	7.0E-70	11525964	NT	Homo sapiens karyopherin beta 2b, transportin (TRN2), mRNA
9382	20320	33224	2.01	7.0E-70	11525964	NT	Homo sapiens karyopherin beta 2b, transportin (TRN2), mRNA
9575	22075	35038	1.33	7.0E-70	4557624	NT	Homo sapiens glutamate-cysteine ligase (gamma-glutamylcysteine synthetase), catalytic (72 kD) (GLCLC) mRNA
10199	22894	35686	0.61	7.0E-70	AB036429.1	NT	Homo sapiens NDST4 mRNA for N-deacetylaseN-sulfotransferase 4, complete cds
10199	22894	35687	0.61	7.0E-70	AB036429.1	NT	Homo sapiens NDST4 mRNA for N-deacetylaseN-sulfotransferase 4, complete cds
10953	23468	36492	1.59	7.0E-70	11429685	NT	Homo sapiens spastic paraplegia 4 (autosomal dominant; spastin) (SPG4), mRNA
10953	23468	36493	1.59	7.0E-70	11429685	NT	Homo sapiens spastic paraplegia 4 (autosomal dominant; spastin) (SPG4), mRNA



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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11468	23918	36986	2.2	7.0E-70	11526319	NT	Homo sapiens HIR (histone cell cycle regulation defective, <i>S. cerevisiae</i> ) homolog A (HIRA), mRNA
11468	23918	36987	2.2	7.0E-70	11526319	NT	Homo sapiens HIR (histone cell cycle regulation defective, <i>S. cerevisiae</i> ) homolog A (HIRA), mRNA
904	13518	26038	2	6.0E-70	4502168	NT	Homo sapiens amyloid beta (A4) precursor protein (protease resistant, <i>S. cerevisiae</i> ) homolog A (HIRA), mRNA
2182	14758	27328	1.02	6.0E-70	M30938.1	NT	Human Ku (p70/p80) subunit mRNA, complete cds
2551	15115	27685	1.42	6.0E-70	8923899	NT	Homo sapiens CMP-N-acetylneuraminic acid synthase (LOC55907), mRNA
2588	15470	27715	1.68	5.0E-70	7662307	NT	Homo sapiens KIAA0792 gene product (KIAA0792), mRNA
2588	15470	27716	1.68	5.0E-70	7662307	NT	Homo sapiens KIAA0792 gene product (KIAA0792), mRNA
11756	24151		3.78	5.0E-70	BE166034.1	EST_HUMAN	MR3-HT0487-150200-115-a08 HT0487 Homo sapiens cDNA
6851	18440	32255	153.56	4.0E-70	T06037.1	EST_HUMAN	EST103926 Fetal brain, <i>Stratagene</i> (cat#938206) Homo sapiens cDNA clone HFBND25
6887	19622	32456	0.79	4.0E-70	AW793226.1	EST_HUMAN	CM4-UM0003-010300-105-g08 UM0003 Homo sapiens cDNA
6887	19622	32457	0.79	4.0E-70	AW793226.1	EST_HUMAN	CM4-UM0003-010300-105-g08 UM0003 Homo sapiens cDNA
1633	14225	26756	1.19	3.0E-70	BE071796.1	EST_HUMAN	RC0-BT0522-071299-011-a12 BT0522 Homo sapiens cDNA
1633	14225	26757	1.19	3.0E-70	BE071796.1	EST_HUMAN	RC0-BT0522-071299-011-a12 BT0522 Homo sapiens cDNA
6100	18716	31467	0.9	3.0E-70	A1831975.1	EST_HUMAN	wh60d03.x1 NCI CGAP CLL1 Homo sapiens cDNA clone IMAGE:2388005 3'
6511	19111	31897	2.36	3.0E-70	BF685233.1	EST_HUMAN	602141561F1 NIH_MGC 48 Homo sapiens cDNA clone IMAGE:4302806 5'
6511	19111	31898	2.36	3.0E-70	BF685233.1	EST_HUMAN	602141561F1 NIH_MGC 48 Homo sapiens cDNA clone IMAGE:4302806 5'
41	12720	25181	0.89	2.0E-70	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (p14K230) mRNA, complete cds
718	13339	25826	11.56	2.0E-70	N42161.1	EST_HUMAN	yy07a10.1 Scores melanocyte 2NBHM Homo sapiens cDNA clone IMAGE:270522 5' similar to SW:D3HI_RAT P28268 3-HYDROXYISOBUTYRATE DEHYDROGENASE PRECURSOR ;
718	13339	25827	11.56	2.0E-70	N42161.1	EST_HUMAN	yy07a10.1 Scores melanocyte 2NBHM Homo sapiens cDNA clone IMAGE:270522 5' similar to SW:D3HI_RAT P28268 3-HYDROXYISOBUTYRATE DEHYDROGENASE PRECURSOR ;
734	13354	25850	3.41	2.0E-70	A1246899.1	EST_HUMAN	qx5Th01.x1 NCI CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2004913 3'
1059	13684	26175	1.89	2.0E-70	8923669	NT	Homo sapiens hypothetical protein FLJ20758 (FLJ20758), mRNA
1226	13825	26340	1.28	2.0E-70	7661983	NT	Homo sapiens KIAA0193 gene product (KIAA0193), mRNA
1226	13825	26341	1.28	2.0E-70	7661983	NT	Homo sapiens KIAA0193 gene product (KIAA0193), mRNA
1778	14368	26912	1.48	2.0E-70	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
2359	14930		4.22	2.0E-70	AA054010.1	EST_HUMAN	zf48g04.r1 Scores retina N2b4HR Homo sapiens cDNA clone IMAGE:380214 5' similar to SW:GAG_HTL1A
3688	16289	28758	2.21	2.0E-70	H37988.1	EST_HUMAN	P03345 GAG POLYPROTEIN ;
3891	16490	28950	0.8	2.0E-70	AL133207.2	NT	yp58b04.r1 Scores fetal liver spleen 1N1LS Homo sapiens cDNA clone IMAGE:191599 5'
4123	16716	29172	5.05	2.0E-70	M69181.1	NT	Novel human gene mapping to chromosome X Human nonmuscle myosin heavy chain-B (MYH10) mRNA, partial cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5706	18332	30836	8.49	2.0E-70	X72662.1	NT	H. sapiens gene for schwannomin (CS8)
5708	18332	30837	8.49	2.0E-70	X72662.1	NT	H. sapiens gene for schwannomin (CS8)
6351	18956	31735	1.22	2.0E-70	AF310105.1	NT	Homo sapiens NALP1 mRNA, complete cds
6745	19338	32144	1.97	2.0E-70	D12625.1	NT	Human mRNA for NF1 protein isoform (neurofibromin isoform), complete cds
6773	19365	32176	9.77	2.0E-70	AF123074.1	NT	Homo sapiens cytoplasmic dynein intermediate chain 1 mRNA, complete cds
6773	19365	32177	9.77	2.0E-70	AF123074.1	NT	Homo sapiens cytoplasmic dynein intermediate chain 1 mRNA, complete cds
7070	18089	30446	1.84	2.0E-70	11422642	NT	Homo sapiens sialyltransferase 6 (N-acetylglucosaminide alpha 2,3-sialyltransferase) (SIA T6), mRNA
7434	19958	32823	0.84	2.0E-70	AF288207.1	NT	Homo sapiens cysteinyl-RNA synthetase mRNA, complete cds, alternatively spliced
7859	20401	33307	6.42	2.0E-70	M21741.1	NT	Human guanine nucleotide-binding protein alpha-subunit gene (G-s-alpha), exons 4 and 5
8184	20705	33621	0.75	2.0E-70	11423599	NT	Homo sapiens amylo-1,8-glucosidase, 4-alpha-glucanotransferase (glycogen debranching enzyme, glycogen storage disease type III) (AGL), mRNA
8594	21133		0.8	2.0E-70	H47959.1	EST_HUMAN	Yp79g02.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:193682 5'
9096	21632	34571	0.97	2.0E-70	11528355	NT	Homo sapiens dynein p82 subunit (LOC51164), mRNA
10044	22539	35536	1.3	2.0E-70	AF123303.1	NT	Homo sapiens calcium-binding transporter mRNA, partial cds
10490	22984	35992	0.6	2.0E-70	AB033042.1	NT	Homo sapiens mRNA for KIAA1216 protein, partial cds
10950	23465	36487	3.48	2.0E-70	8923420	NT	Homo sapiens hypothetical protein FLJ20450 (FLJ20450), mRNA
10950	23465	36488	3.48	2.0E-70	8923420	NT	Homo sapiens hypothetical protein FLJ20450 (FLJ20450), mRNA
11497	23946	37016	7.73	2.0E-70	4503520	NT	Homo sapiens eukaryotic translation initiation factor 3, subunit 6 (48kD) (EIF3S6) mRNA
12157	24397	30976	2.52	2.0E-70	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
12157	24397	30977	2.52	2.0E-70	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
3440	16048		2.73	1.0E-70	4507476	NT	Homo sapiens transglutaminase 3 (E polypeptide, protein-glutamine-gamma-glutamyltransferase) (TGM3) mRNA
9204	21721		0.84	1.0E-70	W85795.1	EST_HUMAN	Zf55g05.r1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:416024 5'
9714	22212		0.81	1.0E-70	AA442292.1	EST_HUMAN	Zv54c03.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:757444 5'
10814	23335	36348	15.93	1.0E-70	AV738538.1	EST_HUMAN	AV738538 CB Homo sapiens cDNA clone CBLBGB10 5'
6099	18715	31465	9.2	9.0E-71	A1143870.1	EST_HUMAN	qe04f0.1.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1738009 3' similar to TR:O14045
6099	18715	31466	9.2	9.0E-71	A1143870.1	EST_HUMAN	O14045 PHOSPHOTRANSFERASE ;
7098	19669	32508	1.82	9.0E-71	A1654903.1	EST_HUMAN	wb52c05.x1 NCL_CGAP_G06 Homo sapiens cDNA clone IMAGE:2309288 3' similar to TR:P97213 P97213 CDU2, CDU1, TCDD, TCDB, TCDE, TCDA, TCDC, CDD1, CDD2, CDD3, AND CDD4 GENES ;
11399	19669	32508	5.11	9.0E-71	A1654903.1	EST_HUMAN	wb52c05.x1 NCL_CGAP_G06 Homo sapiens cDNA clone IMAGE:2309288 3' similar to TR:P97213 P97213 CDU2, CDU1, TCDD, TCDB, TCDE, TCDA, TCDC, CDD1, CDD2, CDD3, AND CDD4 GENES ;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9000	21537		3.85	8.0E-71	AA171451.1	EST_HUMAN	z21d11.11 Stratagene neuroepithelium (#937231) Homo sapiens cDNA clone IMAGE:610101 5' similar to TR:G1143061 G1143061 STRAIN XA34 POL :
7410	19935	32800	7.39	7.0E-71	AA442230.1	EST_HUMAN	z60h08.11 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:758075 5'
8612	21151	34095	1.34	7.0E-71	AA705457.1	EST_HUMAN	z97a06.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:482228 3'
11211	23714	36769	5.33	7.0E-71	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
2251	14825	27401	7.82	5.0E-71	AF056322.1	NT	Homo sapiens SP100-HMG nuclear autoantigen (SP100) mRNA, complete cds
4197	16787	29238	1.17	5.0E-71	AW818405.1	EST_HUMAN	QV4-ST0234-181199-037-705 ST0234 Homo sapiens cDNA
6041	18680	31399	1.72	5.0E-71	4502740	NT	Homo sapiens cyclin-dependent kinase 6 (CDK6) mRNA
6768	19361	32170	1.8	5.0E-71	11641408	NT	Homo sapiens keratin, hair, acidic, 7 (KRT7A7), mRNA
7000	19498	32318	0.8	5.0E-71	7682209	NT	Homo sapiens KIAA0823 gene product (KIAA0823), mRNA
7200	19731	32583	0.67	5.0E-71	11431590	NT	Homo sapiens protein kinase C, beta 1 (PRKCB1), mRNA
7520	20040	32609	2.64	5.0E-71	M38106.1	NT	Human neurofibromatosis protein type 1 mRNA, 3' end of cds
7693	20202	33089	0.72	5.0E-71	11528445	NT	Homo sapiens MAGUK protein p55T, Protein Associated with Lins 2 (LOC51878), mRNA
7716	20224	33113	20.65	5.0E-71	AF072810.1	NT	Homo sapiens transcription factor WSTF mRNA, complete cds
8460	21000	33918	0.69	5.0E-71	5453777	NT	Homo sapiens nuclear factor related to kappa B binding protein (NFKB) mRNA
8460	21000	33917	0.69	5.0E-71	5453777	NT	Homo sapiens nuclear factor related to kappa B binding protein (NFKB) mRNA
9825	22323		2.28	5.0E-71	X13467.1	NT	Human PreA4 gene for Alzheimer's disease A4 amyloid protein precursor (exon 2)
10513	23051	36082	1.57	5.0E-71	5728900	NT	Homo sapiens (GF-1) mRNA-binding protein 3 (KOC1), mRNA
10859	23380	36399	4.63	5.0E-71	11436514	NT	Homo sapiens pro-platelet basic protein (includes platelet basic protein, beta-thromboglobulin, connective tissue-activating peptide III, neutrophil-activating peptide-2) (PPBP), mRNA
11071	23583	36624	2.24	5.0E-71	11438069	NT	Homo sapiens similar to hypothetical protein FLJ20163 (H. sapiens) (LOC63325), mRNA
11706	24119	37152	1.78	5.0E-71	11417882	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
108	12784	25267	1.08	4.0E-71	4507592	NT	Homo sapiens tumor necrosis factor (ligand) superfamily, member 10 (TNFSF10) mRNA
372	13021	25507	116.83	4.0E-71	AF157626.1	NT	Equus caballus glyceraldehyde-3-phosphate dehydrogenase mRNA, partial cds
372	13021	25507	116.83	4.0E-71	AF157626.1	NT	Equus caballus glyceraldehyde-3-phosphate dehydrogenase mRNA, partial cds
2911	15528	27998	3.25	4.0E-71	4505880	NT	Homo sapiens plasminogen (PLG) mRNA
4519	17103	29549	5.18	4.0E-71	AF056322.1	NT	Homo sapiens SP100-HMG nuclear autoantigen (SP100) mRNA, complete cds
5123	17695	30132	6.54	4.0E-71	7657602	NT	Homo sapiens putative heme-binding protein (SOUL), mRNA
7977	20519		1.23	3.0E-71	AU135734.1	EST_HUMAN	AU135734 PLACE1 Homo sapiens cDNA clone PLACE1002775 5'
10572	23107	36121	4.09	3.0E-71	AA557883.1	EST_HUMAN	n45h10.s1 NC1_CGAP_P14 Homo sapiens cDNA clone IMAGE:1043683 similar to contains PTR5.13 PTR5 repetitive element;
1273	13869	26389	6.26	2.0E-71	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C008
5523	18155	30570	6.94	2.0E-71	D87462.1	NT	Human mRNA for KIAA0272 gene, partial cds
5523	18155	30571	6.94	2.0E-71	D87462.1	NT	Human mRNA for KIAA0272 gene, partial cds

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10478	22972	35979	2.97	2.0E-71	AF095703.1	NT	Homo sapiens short chain L-3-hydroxyacyl-CoA dehydrogenase precursor (HADHSC) gene, nuclear gene encoding mitochondrial protein, complete cds
10478	22972	35980	2.97	2.0E-71	AF095703.1	NT	Homo sapiens short chain L-3-hydroxyacyl-CoA dehydrogenase precursor (HADHSC) gene, nuclear gene encoding mitochondrial protein, complete cds
10574	23109	36122	3.75	2.0E-71	BE018477.1	EST_HUMAN	bb81a08.y1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3048754 5' similar to SW.R238_HUMAN P54727 UV EXCISION REPAIR PROTEIN RAD23 HOMOLOG B.
11454	23904	36971	1.96	2.0E-71	RS5626.1	EST_HUMAN	y177ct1.1 Soares breast 2NBH8st Homo sapiens cDNA clone IMAGE:154772 5'
11825	24193		10.18	2.0E-71	T95489.1	EST_HUMAN	y643e09.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:120520 5'
666	13290	25771		1.0E-71	A1077927.1	EST_HUMAN	oy15a03.s1 Soares senescent fibroblasts_NbHSF Homo sapiens cDNA clone IMAGE:1665916 3' similar to contains LOR1 b2 LOR1 repetitive element
977	13589	26104	2.23	1.0E-71	7706281	NT	Homo sapiens neuronal cell death-related protein (LOC51616), mRNA
1139	13742	26251	4.37	1.0E-71	AF205890.1	NT	Homo sapiens disabled-2 gene, exons 2 through 15 and complete cds
1385	13879	26506	10.24	1.0E-71	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (p4K230) mRNA, complete cds
2129	14707	27278	1.38	1.0E-71	AB017007.1	NT	Homo sapiens PMS2L16 mRNA, partial cds
2129	14707	27279	1.38	1.0E-71	AB017007.1	NT	Homo sapiens PMS2L16 mRNA, partial cds
2717	15274	27840	3.73	1.0E-71	7657153	NT	Homo sapiens hairy/enhancer-of-split related with YRPW motif-like (HEYL), mRNA
3549	16153	28635	1.24	1.0E-71	AF119665.1	NT	Homo sapiens inorganic pyrophosphatase mRNA, complete cds
3656	16259	28730	6.17	1.0E-71	AF246219.1	NT	Homo sapiens SNARE protein kinase SNAK mRNA, complete cds
3656	16259	28731	6.17	1.0E-71	AF246219.1	NT	Homo sapiens SNARE protein kinase SNAK mRNA, complete cds
3710	16311	28778	0.95	1.0E-71	BE122850.1	EST_HUMAN	02_15 Human Epidermal Keratinocyte Subtraction Library- Upregulated Transcripts Homo sapiens cDNA clone 02_15 5' similar to Homo sapiens chromosome 19
3710	16311	28779	0.95	1.0E-71	BE122850.1	EST_HUMAN	02_15 Human Epidermal Keratinocyte Subtraction Library- Upregulated Transcripts Homo sapiens cDNA clone 02_15 5' similar to Homo sapiens chromosome 19
3804	16404	28988	2.11	1.0E-71	AF218904.1	NT	Homo sapiens attractin precursor (ATRIN) gene, exon 19
4569	17152	29598	2.19	1.0E-71	D28476.1	NT	Human mRNA for KIAA0045 gene, complete cds
4695	17277	29723	0.61	1.0E-71	H23176.1	EST_HUMAN	ym56h10.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:52528 5'
6840	19430	32246	1.54	1.0E-71	11426182	NT	Homo sapiens GCN5 (general control of amino-acid synthesis, yeast, homolog)-like 2 (GCN5L2), mRNA
7144	19677	32517	1.33	1.0E-71	AB011131.1	NT	Homo sapiens mRNA for KIAA0559 protein, partial cds
7352	19878	32743	11.94	1.0E-71	U80753.1	NT	Homo sapiens CAGL79 mRNA, partial cds
8089	20630	33543	0.87	1.0E-71	AF105267.1	NT	Homo sapiens glypican-6 (GPC6) mRNA, complete cds
8110	20651	33559	2.11	1.0E-71	11425430	NT	Homo sapiens myomesin (M-protein) 2 (165KD) (MYOM2), mRNA
8383	20923	33842	3.93	1.0E-71	8922811	NT	Homo sapiens hypothetical protein FLJ10998 (FLJ10998), mRNA
8383	20923	33843	3.93	1.0E-71	8922811	NT	Homo sapiens hypothetical protein FLJ10998 (FLJ10998), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8155	21690	34634	0.97	1.0E-71	S72393.1	NT	CSNK2A1=casein kinase II (CKII) subunit alpha [human, Genomic, 18882 nt]
8920	22416	35391	7.06	1.0E-71	AY007643.1	NT	Homo sapiens cytochrome c oxidase subunit VIIa-related protein gene, complete cds
8980	22475		4.9	1.0E-71	AV761217.1	EST_HUMAN	AV761217 MDS Homo sapiens cDNA clone MDSEIA03 5'
10431	22925	35931	1.57	1.0E-71	11433142	NT	Homo sapiens activated leucocyte cell adhesion molecule (ALCAM), mRNA
10663	23195		6.4	1.0E-71	AV761217.1	EST_HUMAN	AV761217 MDS Homo sapiens cDNA clone MDSEIA03 5'
10762	23286	36298	2.09	1.0E-71	11418903	NT	Homo sapiens coagulation factor XIII, A1 polypeptide (F13A1), mRNA
11026	23539	36574	1.82	1.0E-71	11417191	NT	Homo sapiens leucylcystinyl aminopeptidase (LNPEP), mRNA
11025	23539	36575	1.82	1.0E-71	11417191	NT	Homo sapiens leucylcystinyl aminopeptidase (LNPEP), mRNA
12208	24432		15.2	1.0E-71	AB011399.1	NT	Homo sapiens gene for AF-8, complete cds
432	13065	25559	1.33	9.0E-72	AB57635.1	EST_HUMAN	wk95g03.x1 NCL CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2423188 3' similar to TR:O88705 O88705 HYPOTHE TICAL 38.6 KD PROTEIN, :contains Alu repetitive element
432	13065	25560	1.33	9.0E-72	AB57635.1	EST_HUMAN	wk95g03.x1 NCL CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2423188 3' similar to TR:O88705 O88705 HYPOTHE TICAL 38.6 KD PROTEIN, :contains Alu repetitive element
6259	18968	31638	0.87	8.0E-72	BF035752.1	EST_HUMAN	601458747F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862451 5'
10990	23504	36533	2.04	8.0E-72	11424480	NT	Homo sapiens nuclear RNA helicase, DECD variant of DEAD box family (DDXL), mRNA
10990	23504	36534	2.04	8.0E-72	11424480	NT	Homo sapiens nuclear RNA helicase, DECD variant of DEAD box family (DDXL), mRNA
10990	23504	36535	2.04	8.0E-72	11424480	NT	Homo sapiens nuclear RNA helicase, DECD variant of DEAD box family (DDXL), mRNA
4190	16778	29225	1.48	7.0E-72	4501866	NT	Homo sapiens aconitase 2, mitochondrial (ACO2), nuclear gene encoding mitochondrial protein, mRNA
4190	16778	29226	1.48	7.0E-72	4501866	NT	Homo sapiens aconitase 2, mitochondrial (ACO2), nuclear gene encoding mitochondrial protein, mRNA
4190	16778	29227	1.48	7.0E-72	4501866	NT	Homo sapiens aconitase 2, mitochondrial (ACO2), nuclear gene encoding mitochondrial protein, mRNA
7178	19710	32558	3.23	7.0E-72	S41694.1	NT	(pseudogene) PTMAP2=probthymosin alpha [human, Genomic, 1182 nt, segment 2 of 3]
12339	24521		1.9	7.0E-72	F26259.1	EST_HUMAN	HSPD13670 HIV3 Homo sapiens cDNA clone s400051G02
8324	20865		4.31	6.0E-72	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
67	12746	25223	1.56	5.0E-72	BF333707.1	EST_HUMAN	QV0-CS0010-150900-398-e11 CS0010 Homo sapiens cDNA
67	12746	25224	1.56	5.0E-72	BF333707.1	EST_HUMAN	QV0-CS0010-150900-398-e11 CS0010 Homo sapiens cDNA
68	12746	25223	10.23	5.0E-72	BF333707.1	EST_HUMAN	QV0-CS0010-150900-398-e11 CS0010 Homo sapiens cDNA
68	12746	25224	10.23	5.0E-72	BF333707.1	EST_HUMAN	QV0-CS0010-150900-398-e11 CS0010 Homo sapiens cDNA
1178	13780		2.72	5.0E-72	L11845.1	NT	Homo sapiens alpha-tubulin mRNA, complete cds
7030	19564	32391	1.36	5.0E-72	AU128584.1	EST_HUMAN	AU128584 NT2RP2 Homo sapiens cDNA clone NT2RP2003751 5'

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8711	21250	34173	3.16	5.0E-72	AW161274.1	EST_HUMAN	au80c03.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782564 5' similar to
9871	22368	35346	0.62	5.0E-72	AV724632.1	EST_HUMAN	TR:Q89785 Q89785 HYPOTHETICAL 32.4 KD PROTEIN ;contains element MSR1 repetitive element ;
11122	23630	36672	3.44	5.0E-72	BF331571.1	EST_HUMAN	AV724632 HTB Homo sapiens cDNA clone HTBAKB01 5'
11122	23630	36673	3.44	5.0E-72	BF331571.1	EST_HUMAN	MR4-BT0598-010600-005-d05 BT0598 Homo sapiens cDNA
11500	23949	37018	1.62	5.0E-72	BE208545.1	EST_HUMAN	MR4-BT0598-010600-005-d05 BT0598 Homo sapiens cDNA
11500	23949	37019	1.62	5.0E-72	BE208545.1	EST_HUMAN	ba08g08.y1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2823806 5'
11895	25047		2.89	5.0E-72	BE926645.1	EST_HUMAN	ba08g08.y1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2823806 5'
4948	17523		1.21	4.0E-72	11034844	NT	QV1-BT0632-280800-342-a10 BT0632 Homo sapiens cDNA
5422	17979	30387	1.05	4.0E-72	AB033104.1	NT	Homo sapiens hypothetical protein J1057B20.2 (J1057B20.2), mRNA
5656	18283	30761	0.72	4.0E-72	AF170025.1	NT	Homo sapiens mRNA for KIAA1278 protein, partial cds
6674	19270	32075	0.81	4.0E-72	T87947.1	EST_HUMAN	Homo sapiens zinc finger protein ZFP-95 (ZFP95) mRNA, alternatively spliced, complete cds
7439	19963	32829	3.01	4.0E-72	5729867	NT	yd83a01.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:115752 5' similar to
9699	22198	35171	1.64	4.0E-72	8923669	NT	SP:A44282 A44282 RETROVIRUS-RELATED POLYPROTEIN - HUMAN ;
							Homo sapiens hct domain and RLD 2 (HERC2), mRNA
							Homo sapiens hypothetical protein FLJ20758 (FLJ20758), mRNA
							qh67c02.x1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:1849730 3' similar to
10318	22812	35907	0.98	4.0E-72	A1248796.1	EST_HUMAN	TR:Q14498 Q14498 SPLICING FACTOR. [1] ;contains Alu repetitive element; contains element L1 repetitive element ;
11402	23853	36918	7.8	4.0E-72	H79421.1	EST_HUMAN	element ;
11528	23976	37046	2.48	4.0E-72	T81910.1	EST_HUMAN	yu28a03.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:235084 5'
12263	24473	30933	4.5	4.0E-72	AJ277546.2	NT	yd29d09.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:109649 3'
22	12701	25157	3.55	3.0E-72	5031976	NT	
836	13549		1.46	3.0E-72	AA723823.1	EST_HUMAN	Homo sapiens WEE1 gene for protein kinase and partial ZNF143 gene for zinc finger transcription factor
1196	13797	26307	7.76	3.0E-72	U16308.1	NT	Homo sapiens pre-B-cell colony-enhancing factor (PBEF) mRNA
1196	13797	26308	7.76	3.0E-72	U16308.1	NT	ah63a08.s1 Soares_testis_NHT Homo sapiens cDNA clone 1310280 3'
1235	13834	26348	1.33	3.0E-72	U80226.1	NT	Human chondroitin sulfate proteoglycan versican V0 splice-variant precursor peptide mRNA, complete cds
1235	13834	26349	1.33	3.0E-72	U80226.1	NT	Human chondroitin sulfate proteoglycan versican V0 splice-variant precursor peptide mRNA, complete cds
1567	14159	26690	0.98	3.0E-72	BE242161.1	EST_HUMAN	Human gamma-aminobutyric acid transaminase mRNA, partial cds
3110	15725	28196	13.29	3.0E-72	AJ229043.1	NT	Human gamma-aminobutyric acid transaminase mRNA, partial cds
							TCAAP-IE1252 Pediatric acute myelogenous leukemia cell (FAB M1) Baylor-HGSC project-TCAA Homo sapiens cDNA clone TCAAP1252
							Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 3/3

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3317	15927	28404	2.84	3.0E-72	8923548	NT	Homo sapiens hypothetical protein FLJ20585 (FLJ20585), mRNA
3885	16494	28955	2.71	3.0E-72	S77589.1	NT	TCR V delta 2-C alpha =T-cell receptor delta and C alpha fusion gene (alternatively spliced, splice junction)
4509	17093	29540	0.94	3.0E-72	AF143892.1	NT	(human, precursor B-cell line REH, mRNA Partial, 211 nt)
4509	17093	29541	0.94	3.0E-72	AF143892.1	NT	Homo sapiens thiodoxin-like protein (TXNL) gene, exon 3
4643	17225	29878	2.89	3.0E-72	11416198	NT	Homo sapiens thiodoxin-like protein (TXNL) gene, exon 3
5711	18337		1.07	3.0E-72	4759093	NT	Homo sapiens hypothetical protein (FLJ11127), mRNA
6134	18748	31504	1.98	3.0E-72	AF073367.1	NT	Homo sapiens semaphorin W (SEMAW) mRNA
6134	18748	31505	1.98	3.0E-72	AF073367.1	NT	Homo sapiens growth factor receptor-bound protein 10 (GRB10) gene, exon 5
6314	18921	31697	4.49	3.0E-72	AB029004.1	NT	Homo sapiens mRNA for KIAA1081 protein, partial cds
6314	18921	31698	4.49	3.0E-72	AB029004.1	NT	Homo sapiens mRNA for KIAA1081 protein, partial cds
6726	19320	32125	3.59	3.0E-72	4826987	NT	Homo sapiens ribosomal protein L3-like (RPL3L) mRNA
7585	20100	32975	1.92	3.0E-72	U80017.1	NT	Homo sapiens basic transcription factor 2 p44 (btf2p44) gene, partial cds, neuronal apoptosis inhibitory protein (nrip) and survival motor neuron protein (smn) genes, complete cds
8118	20657	33566	1.52	3.0E-72	5031892	NT	Homo sapiens nuclear receptor subfamily 1, group H, member 3 (NR1H3), mRNA
10328	22822	35818	1.87	3.0E-72	X98289.1	NT	Homo sapiens S100A12 gene for Calgranulin C, exon 2 and joined cds
12174	24413	30946	2.03	3.0E-72	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
6113	18726	31482	1.41	2.0E-72	11426671	NT	Homo sapiens solute carrier family 13 (sodium-dependent dicarboxylate transporter), member 2 (SLC13A2), mRNA
9025	21582	34490	0.76	2.0E-72	BF308560.1	EST_HUMAN	601890419F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4131461 5'
9025	21582	34491	0.76	2.0E-72	BF308560.1	EST_HUMAN	601890419F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4131461 5'
10619	23151	36163	2.52	2.0E-72	AA789277.1	EST_HUMAN	aj28b09.s1 Soares_testis_NHT Homo sapiens cDNA clone 1391609 3' similar to gb:X02067 H. sapiens mRNA for TSL RNA pseudogene (HUMAN);
12260	24470	30930	4.78	2.0E-72	AF182714.1	NT	Rattus norvegicus putative phosphatidylphosphatidylpyruvate translocator mRNA, complete cds
2120	14698	27267	1.03	1.0E-72	AA846225.1	EST_HUMAN	ai83402.s1 Soares_parenchymal_tumor_NHHPA Homo sapiens cDNA clone IMAGE:1387395 3'
5940	18580	31289	4.04	1.0E-72	7657676	NT	Homo sapiens vacuolar protein sorting 41 (yeast homolog) (VPS41), mRNA
6676	19272	32076	1.18	1.0E-72	11321578	NT	Homo sapiens myosin, heavy polypeptide 13, skeletal muscle (MYH13), mRNA
6676	19272	32077	1.18	1.0E-72	11321578	NT	Homo sapiens myosin, heavy polypeptide 13, skeletal muscle (MYH13), mRNA
6744	24768	32143	1.3	1.0E-72	AV751818.1	EST_HUMAN	AV751818 NPd Homo sapiens cDNA clone NPDAIE11 5'
7633	20145	33026	3.81	1.0E-72	BE175434.1	EST_HUMAN	RC4-HT0578-170300-012-g02 HT0578 Homo sapiens cDNA
7633	20145	33027	3.81	1.0E-72	BE175434.1	EST_HUMAN	RC4-HT0578-170300-012-g02 HT0578 Homo sapiens cDNA
9510	22010	34968	7.2	1.0E-72	AF222742.1	NT	Homo sapiens synaptic glycoprotein SC2 (SC2) mRNA, complete cds
9510	22010	34969	7.2	1.0E-72	AF222742.1	NT	Homo sapiens synaptic glycoprotein SC2 (SC2) mRNA, complete cds
1508	44100	26637	1.28	9.0E-73	AW374988.1	EST_HUMAN	MF0-C10063-071099-002-h11 CT0063 Homo sapiens cDNA

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6190	18800	31570	0.98	9.0E-73	11525893	NT	Homo sapiens membrane protein, palmitoylated 3 (MAGUK p55 subfamily member 3) (MPP3), mRNA
10829	23350		27.89	9.0E-73	11424099	NT	Homo sapiens ribosomal protein L13a (RPL13A), mRNA
1076	13680	26190	1.62	8.0E-73	AW071755.1	EST_HUMAN	ws55c06.x1 NCJ CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2501098 3' similar to TR:Q59050
3332	15942	28417	0.61	8.0E-73	11435180	NT	Homo sapiens gephyrin (GPH), mRNA
5768	18394	31108	0.78	8.0E-73	4505798	NT	Homo sapiens phosphatidylinositol 3-kinase, class 2, alpha polypeptide (PIK3C2A), mRNA
6687	19283	32086	4.21	8.0E-73	11426469	NT	Homo sapiens lysosome homolog (LOC57151), mRNA
8039	20581	33488	2.58	8.0E-73	AF113129.1	NT	Homo sapiens vacuolar ATPase isoform VA68 mRNA, complete cds
9275	21801	34751	5.4	8.0E-73	BE019900.1	EST_HUMAN	bb62a06.y1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3030034 5' similar to gb:X04098_cds1 ACTIN, CYTOSOLASMIC 2 (HUMAN); gb:M21495 Mouse cytoskeletal gamma-actin mRNA, complete cds (MOUSE);
9655	22154	35123	1.83	8.0E-73	11526037	NT	Homo sapiens interleukin 12 receptor, beta 1 (IL12RB1), mRNA
9655	22154	35124	1.83	8.0E-73	11526037	NT	Homo sapiens interleukin 12 receptor, beta 1 (IL12RB1), mRNA
12324	24511	30919	7.07	8.0E-73	11418189	NT	Homo sapiens thyroid autoantigen 70kD (Ku antigen) (G22P1), mRNA
1173	13775	26285	1.37	7.0E-73	8923290	NT	Homo sapiens hypothetical protein FLJ20309 (FLJ20309), mRNA
3340	15950	28426	1.27	7.0E-73	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21 C006
4298	16884	29329	2.59	7.0E-73	AF019413.1	NT	Homo sapiens HLA class III region containing tenascin X (tenascin-X) gene, partial cds; cytochrome P450 21-hydroxylase (CYP21B), complement component C4 (C4B) G11, helicase (SK12W), RD, complement factor B (BF), and complement component C2 (C2) genes, >
5079	17652		1.64	7.0E-73	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21 C082
169	12832		2.14	8.0E-73	AL163218.2	NT	Homo sapiens chromosome 21 segment HS21 C018
7224	19755	32610	3.52	8.0E-73	BE166574.1	EST_HUMAN	QV0-HT0494-020300-137-d03 HT0494 Homo sapiens cDNA
5460	18095	30413	1.78	4.0E-73	11422159	NT	Homo sapiens HELG protein (FAM4A1), mRNA
1902	14487	27048	1.78	3.0E-73	11435913	NT	Homo sapiens heme-binding protein (HEBP), mRNA
1902	14487	27049	1.78	3.0E-73	11435913	NT	Homo sapiens heme-binding protein (HEBP), mRNA
6799	19390	32205	1.03	3.0E-73	AA136403.1	EST_HUMAN	zn195604.s1 Stratagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:565950 3' similar to gb:Z23064_cds1 HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN G (HUMAN);
8693	21232	34152	0.63	3.0E-73	AV729428.1	EST_HUMAN	AV729428 HTC Homo sapiens cDNA clone HTCAAF071 5'
8693	21232	34153	0.63	3.0E-73	AV729428.1	EST_HUMAN	AV729428 HTC Homo sapiens cDNA clone HTCAAF071 5'
11478	23928		1.58	3.0E-73	A1004040.1	EST_HUMAN	ou11d02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1625955 3'
12579	24675		1.34	3.0E-73	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21 C046
12583	24677		1.67	3.0E-73	AW898081.1	EST_HUMAN	RC3-NN0066-270400-011-c04 NN0066 Homo sapiens cDNA
884	13498	26016	2.4	2.0E-73	AF139897.1	NT	Homo sapiens BASS1 (BASS1) mRNA, partial cds



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1889	14571		2.46	2.0E-73	AW898081.1	EST_HUMAN	RC3-NN0068-270400-011-c04 NN0068 Homo sapiens cDNA
3215	15827	28305	2.05	2.0E-73	4502582	NT	Homo sapiens caspase 8, apoptosis-related cysteine protease (CASP8) mRNA
3604	16208	28688	0.88	2.0E-73	7669539	NT	Homo sapiens Parkinson disease (autosomal recessive, juvenile) 2, parkin (PARK2), transcript variant 3, mRNA
3604	16208	28687	0.88	2.0E-73	7669539	NT	Homo sapiens Parkinson disease (autosomal recessive, juvenile) 2, parkin (PARK2), transcript variant 3, mRNA
6807	19204	32011	6.35	2.0E-73	AB046811.1	NT	Homo sapiens mRNA for KIAA1591 protein, partial cds
6801	19392	32207	1.52	2.0E-73	11431471	NT	Homo sapiens interleukin 4 receptor (IL4R), mRNA
6801	19392	32208	1.52	2.0E-73	11431471	NT	Homo sapiens interleukin 4 receptor (IL4R), mRNA
9451	21977	34928	0.88	2.0E-73	AF198349.1	NT	Gallus gallus Dach2 protein (Dach2) mRNA, complete cds
9451	21977	34929	0.88	2.0E-73	AF198349.1	NT	Gallus gallus Dach2 protein (Dach2) mRNA, complete cds
10320	22814	35810	1.46	2.0E-73	4504168	NT	Homo sapiens glutathione synthetase (GSS) mRNA
10391	22885	35880	1.18	2.0E-73	11496980	NT	Homo sapiens supervillin (SVL), transcript variant 1, mRNA
10391	22885	35881	1.18	2.0E-73	11496980	NT	Homo sapiens supervillin (SVL), transcript variant 1, mRNA
10933	23451	36472	3.48	2.0E-73	4557612	NT	Homo sapiens galactosylceramidase (Krabbe disease) (GALC), mRNA
10933	23451	36473	3.48	2.0E-73	4557612	NT	Homo sapiens galactosylceramidase (Krabbe disease) (GALC), mRNA
10982	23477	36502	1.85	2.0E-73	AB028982.1	NT	Homo sapiens mRNA for KIAA1059 protein, partial cds
12066	14571		2.75	2.0E-73	AW898081.1	EST_HUMAN	RC3-NN0068-270400-011-c04 NN0068 Homo sapiens cDNA
12885	24735	30825	1.41	2.0E-73	AB028916.1	NT	Homo sapiens mRNA for KIAA1093 protein, partial cds
1818	14408	26953	1.74	1.0E-73	AU121585	EST_HUMAN	AU121585 MAMMA1 Homo sapiens cDNA clone MAMMA1000460 5'
2525	15089	27861	0.97	1.0E-73	AF198349.1	NT	Gallus gallus Dach2 protein (Dach2) mRNA, complete cds
6500	19100	31885	1.05	1.0E-73	BE151283.1	EST_HUMAN	GM1-HT0282-11199-042-h10 HT0282 Homo sapiens cDNA
					qg61b07.r1 Soares_tests_NHT		Homo sapiens cDNA clone IMAGE:1839637 5' similar to contains element
9419	21928	34874	1.41	1.0E-73	AI147427.1	EST_HUMAN	MER22 repetitive element
11325	23023	36032	3.83	1.0E-73	BE365477.1	EST_HUMAN	601276071F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3817105 5'
770	13389	25888	2.42	8.0E-74	4557428	NT	Homo sapiens CD39-like 4 (CD39L4) mRNA
6073	18690	31435	1.87	8.0E-74	S83194.1	NT	Ca2+/calmodulin-dependent protein kinase IV kinase isoform [rats, brain, mRNA, 3429 nt]
6073	18690	31436	1.87	8.0E-74	S83194.1	NT	Ca2+/calmodulin-dependent protein kinase IV kinase isoform [rats, brain, mRNA, 3429 nt]
1682	14574	27133	3.28	7.0E-74	AJ001689.1	NT	Homo sapiens NKG2D gene, exon 10
3371	15979	28456	1.18	7.0E-74	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
9167	21744	34687	2.49	7.0E-74	BE967432.1	EST_HUMAN	601849284F1 NIH_MGC_73 Homo sapiens cDNA clone IMAGE:3932897 5'
12323	24510	30918	6.87	7.0E-74	BE266305.1	EST_HUMAN	601191927F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3535855 5'
							Homo sapiens S164 gene, partial cds; PS1 and hypothetical protein genes, complete cds; and S171 gene, partial cds
1161	13764	28275	4.55	6.0E-74	AF109907.1	NT	

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1668	14261	26794	0.9	6.0E-74	AW263177.1	EST_HUMAN	xn78g07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2700636 3'
2355	14926	27499	10.83	6.0E-74	BE388260.1	EST_HUMAN	601283521F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3605453 5'
2355	14926	27500	10.83	6.0E-74	BE388260.1	EST_HUMAN	601283521F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3605453 5'
2889	15506	27977	1.22	6.0E-74	AW014039.1	EST_HUMAN	UI-H-B10-aah-h-03-0-J1.s1 NCI CGAP_Sub1 Homo sapiens cDNA clone IMAGE:2709365 3'
2889	15506	27978	1.22	6.0E-74	AW014039.1	EST_HUMAN	UI-H-B10-aah-h-03-0-J1.s1 NCI CGAP_Sub1 Homo sapiens cDNA clone IMAGE:2709365 3'
3775	16375	28840	1.64	6.0E-74	BE048848.1	EST_HUMAN	hr54e11.x1 NCI CGAP_K1d11 Homo sapiens cDNA clone IMAGE:3132332 3'
3775	16375	28841	1.64	6.0E-74	BE048848.1	EST_HUMAN	hr54e11.x1 NCI CGAP_K1d11 Homo sapiens cDNA clone IMAGE:3132332 3'
5177	17744	30172	0.85	6.0E-74	4758135	NT	Homo sapiens DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 11 (S.cerevisiae CHL1-like helicase) (DDX11) mRNA
5177	17744	30173	0.85	6.0E-74	4758135	NT	Homo sapiens DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 11 (S.cerevisiae CHL1-like helicase) (DDX11) mRNA
5568	18199	30647	3.28	6.0E-74	11056013	NT	Homo sapiens actin filament associated protein (AFAP), mRNA
938	13551	26067	1.37	5.0E-74	AW020886.1	EST_HUMAN	df17c09.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2483704 5'
2726	15281		4.42	5.0E-74	AW362756.1	EST_HUMAN	PM0-C70289-271099-001-h07 C70289 Homo sapiens cDNA
5603	18232	30692	1.98	5.0E-74	11425417	NT	Homo sapiens phosphatidylinositol glycan, class L (PIGL), mRNA
5961	18583	31317	11.6	5.0E-74	X89670.1	NT	H. sapiens mRNA for TPCR16 protein
6004	18624	31359	8.99	5.0E-74	4507866	NT	Homo sapiens VAMP (vesicle-associated membrane protein)-associated protein A (33kD) (VAPA) mRNA, and translated products
6067	18684	31426	2.33	5.0E-74	11431471	NT	Homo sapiens Interleukin 4 receptor (IL4R), mRNA
6067	18684	31427	2.33	5.0E-74	11431471	NT	Homo sapiens Interleukin 4 receptor (IL4R), mRNA
6976	19552	32377	3.35	5.0E-74	7662263	NT	Homo sapiens KIAA0716 gene product (KIAA0716), mRNA
7980	20522	33428	3.2	5.0E-74	11345483	NT	Homo sapiens hypothetical protein FLJ13222 (FLJ13222), mRNA
10614	23147	36158	1.96	5.0E-74	Y09420.1	NT	H. sapiens mRNA for HIP-1
10614	23147	36159	1.96	5.0E-74	Y09420.1	NT	H. sapiens mRNA for HIP-1
301	12956	25446	2.66	4.0E-74	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
885	13499	26017	9.19	4.0E-74	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
2005	14587	27146	2.26	4.0E-74	AB028898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
2005	14587	27147	2.26	4.0E-74	AB028898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
2117	14695	27263	2.03	4.0E-74	4506192	NT	Homo sapiens proteasome (prosome, macropain) subunit, beta type, 1 (PSMB1) mRNA
2117	14695	27264	2.03	4.0E-74	4506192	NT	Homo sapiens proteasome (prosome, macropain) subunit, beta type, 1 (PSMB1) mRNA
2178	14755	27325	1.21	4.0E-74	AB032894.1	NT	Homo sapiens mRNA for KIAA1168 protein, partial cds
2471	15038	27606	0.89	4.0E-74	AJ006976.1	NT	Homo sapiens PLP gene

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3127	15741	28210	4.58	4.0E-74	AJ008976.1	NT	Homo sapiens PLP gene
3580	16184	28668	1.14	4.0E-74	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
4138	16728	29181	1.01	4.0E-74	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
4655	17237	29892	1.71	4.0E-74	7682183	NT	Homo sapiens KIAA0569 gene product (KIAA0569), mRNA
4720	17301	29746	0.79	4.0E-74	Z17227.1	NT	Homo sapiens mRNA for transmembrane receptor protein
5168	17737	30184	0.61	4.0E-74	AB040909.1	NT	Homo sapiens mRNA for KIAA1476 protein, partial cds
8488	21025		21.13	3.0E-74	AA300378.1	EST_HUMAN	EST13131 Thymus tumor III Homo sapiens cDNA 5' and similar to similar to ribosomal protein L37
8510	21049	33971	0.47	3.0E-74	9968912	NT	Homo sapiens actin-related protein 3-beta (ARP3BETA), mRNA
9294	21894	34841	2.47	3.0E-74	M78984.1	EST_HUMAN	EST01132 Subtracted Hippocampus, Stratagene (cat. #336205) Homo sapiens cDNA clone HHCDF91
10241	22736	35728	2.42	3.0E-74	AA601493.1	EST_HUMAN	no17g05.s1 NCI_CGAP_Phe1 Homo sapiens cDNA clone IMAGE:1100984 3'
983	13605	26119	172.8	2.0E-74	7689491	NT	Homo sapiens glyceraldehyde-3-phosphate dehydrogenase (GAPD), mRNA
983	13605	26120	172.8	2.0E-74	7689491	NT	Homo sapiens glyceraldehyde-3-phosphate dehydrogenase (GAPD), mRNA
1217	13817	26332	0.92	2.0E-74	AF020092.1	NT	Human endogenous retrovirus HERV-K-T470
1287	13882	26407	1.64	2.0E-74	AI950528.1	EST_HUMAN	wk51e07.x1 NCI_CGAP_Lu28 Homo sapiens cDNA clone IMAGE:2547204 3' similar to SW:GG95_HUMAN
1639	14231	26764	4.17	2.0E-74	4885198	NT	Q08379 GOLGIN-95, contains element MER22 repetitive element ; Homo sapiens epidermal growth factor receptor (avian erythroblastic leukemia viral (v-erb-b) oncogene homolog) (EGFR) mRNA
1639	14231	26765	4.17	2.0E-74	4885198	NT	Homo sapiens epidermal growth factor receptor (avian erythroblastic leukemia viral (v-erb-b) oncogene homolog) (EGFR) mRNA
5149	17719	30149	2.97	2.0E-74	AL355092.1	NT	Novel human gene mapping to chromosome 22
5149	17719	30150	2.97	2.0E-74	AL355092.1	NT	Novel human gene mapping to chromosome 22
5155	17725	30158	3.93	2.0E-74	J02963.1	NT	Human platelet glycoprotein IIb mRNA, 3' end
5968	24752	31322	1.72	2.0E-74	BE711134.1	EST_HUMAN	RC8-HT0678-220500-011-C03 HT0678 Homo sapiens cDNA
6055	24755	31412	2.03	2.0E-74	11439587	NT	Homo sapiens PDZ-73 protein (PDZ-73/NY-CO-38), mRNA
6055	24755	31413	2.03	2.0E-74	11439587	NT	Homo sapiens PDZ-73 protein (PDZ-73/NY-CO-38), mRNA
6120	24755	31412	2.72	2.0E-74	11439587	NT	Homo sapiens PDZ-73 protein (PDZ-73/NY-CO-38), mRNA
6120	24755	31413	2.72	2.0E-74	11439587	NT	Homo sapiens PDZ-73 protein (PDZ-73/NY-CO-38), mRNA
7160	19892	32538	1.3	2.0E-74	BF030788.1	EST_HUMAN	601557524F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:3827549 5'
7881	20423	33331	1.56	2.0E-74	AB037816.1	NT	Homo sapiens mRNA for KIAA1395 protein, partial cds
9304	21904	34853	7.76	2.0E-74	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
12033	24323		3.9	2.0E-74	AA196181.1	EST_HUMAN	zp96a06.s1 Stratagene muscle 937209 Homo sapiens cDNA clone IMAGE:628018 3'
12605	24989	30882	1.99	2.0E-74	BF680588.1	EST_HUMAN	602121428F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:4278559 5'
57	12737	25207	2.04	1.0E-74	7657334	NT	Homo sapiens Misshepen/NIK-related kinase (MINK), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
359	13008	25491	4.11	1.0E-74	AW816405.1	EST_HUMAN	QV4-ST0234-181199-037-f05 ST0234 Homo sapiens cDNA
525	13157	25639	0.92	1.0E-74	8922828	NT	Homo sapiens hypothetical protein FLJ11028 (FLJ11028), mRNA
532	13163	25644	10.17	1.0E-74	X02344.1	NT	Homo sapiens beta 2 gene
627	13254	25728	1.88	1.0E-74	4508020	NT	Homo sapiens zinc finger protein 259 (ZNF259) mRNA
1037	13647	26159	2.13	1.0E-74	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
2268	14842	27419	3.73	1.0E-74	AB002059.1	NT	Homo sapiens DNA for Human P2M, complete cds
3173	15786	28258	2.7	1.0E-74	4758697	NT	Homo sapiens mannosidase, alpha, class 2A, member 1 (MAN2A1), mRNA
3994	16592	29064	0.63	1.0E-74	4504116	NT	Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1) mRNA
3994	16592	29065	0.63	1.0E-74	4504116	NT	Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1) mRNA
4040	16638	29106	6.11	1.0E-74	AL163288.2	NT	Homo sapiens chromosome 21 segment HS21C068
4137	16728	29182	0.78	1.0E-74	BE083080.1	EST_HUMAN	RC2-BT0842-270300-019-f08 BT0842 Homo sapiens cDNA
4354	16941	29383	0.75	1.0E-74	BE467769.1	EST_HUMAN	h273h08.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3213663 3' similar to WP:B0511.12
5351	17911	30326	1.67	1.0E-74	D83327.1	NT	CE17351
6806	19397	32211	1.51	1.0E-74	M89914.1	NT	Homo sapiens DCRR1 mRNA, partial cds
7622	20135	33013	1.23	1.0E-74	11417977	NT	Homo sapiens neurofibromin (NF1) gene, complete cds
8000	20542	33444	0.74	1.0E-74	BE49105.1	EST_HUMAN	Homo sapiens KIA00852 protein (KIA00852), mRNA
8000	20542	33445	0.74	1.0E-74	BE49105.1	EST_HUMAN	601070088F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3456280 5'
8740	21279	34202	7.81	1.0E-74	AF214562.1	NT	601070088F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3456280 5'
8768	21307	34230	0.61	1.0E-74	BF351951.1	EST_HUMAN	Homo sapiens tracheal epithelium enriched protein (PLUNC) gene, complete cds
10376	22870	35863	1.37	1.0E-74	11420549	NT	MR0-HT0559-230500-021-a03 HT0559 Homo sapiens cDNA
11659	24086	37144	1.95	1.0E-74	11417856	NT	Homo sapiens hypothetical protein FLJ10783 (FLJ10783), mRNA
11746	24145		3.39	1.0E-74	11417856	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2), mRNA
12400	24560		1.59	1.0E-74	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2), mRNA
2670	15228		4.06	8.0E-75	AF176228.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
12056	24339		2.18	8.0E-75	AL163202.2	NT	Homo sapiens DNA cytosine-5 methyltransferase 3B (DNMT3B) mRNA, complete cds
5376	17895		1.01	6.0E-75	AA789285.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C002
8839	21378	34301	2.15	5.0E-75	BE272325.1	EST_HUMAN	a28c06.s1 Soares_testis_NHT Homo sapiens cDNA clone 1391628 3' similar to TR:Q15377 Q15377 Y-CHROMOSOME RNA RECOGNITION MOTIF PROTEIN
9045	21582	34511	0.62	5.0E-75	AA132611.1	EST_HUMAN	601126088F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:2989865 5'
9122	21658	34598	0.8	5.0E-75	BE561655.1	EST_HUMAN	z017608.11 Stratagene colon (#937204) Homo sapiens cDNA clone IMAGE:587174 5'
9122	21658	34600	0.8	5.0E-75	BE561655.1	EST_HUMAN	601348909F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3687458 5'
9295	21895	34842	1.39	5.0E-75	BF680254.1	EST_HUMAN	601348909F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3687458 5'
						EST_HUMAN	602186616T1 NIH_MGC_49 Homo sapiens cDNA clone IMAGE:4298738 3'

Table 4

## Single Exon Probes Expressed In Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10133	22628	35618	2.5	5.0E-75	AI638623.1	EST_HUMAN	IK31c12.x1 NCL_CGAP_G08 Homo sapiens cDNA clone IMAGE:2242390 3' similar to TR:P87361 P87361 HYPOTHETICAL 20.1 KD PROTEIN ;
117	12788	26270	1.81	4.0E-75	BE081333.1	EST_HUMAN	QV1-BT0632-210200-078-e02 B.T0632 Homo sapiens cDNA
484	13117		1.21	4.0E-75	N36757.1	EST_HUMAN	yx90h08.r1 Soares melanocyte 2NHIM Homo sapiens cDNA clone IMAGE:269055 5'
1802	14392	26937	1.43	4.0E-75	AW897230.1	EST_HUMAN	CM0-NN0057-160400-335-a11 NN0057 Homo sapiens cDNA
2874	15482	27962	5.4	4.0E-75	BE408464.1	EST_HUMAN	601303868F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3638344 5'
5720	18346	31048	0.71	4.0E-75	11417948	NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1), mRNA
5720	18346	31049	0.71	4.0E-75	11417948	NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1), mRNA
6415	18018	31801	5.28	4.0E-75	5578457	NT	Homo sapiens eukaryotic translation initiation factor 3, subunit B (EIF3S8), mRNA
6858	19444	32260	1.84	4.0E-75	11417948	NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1), mRNA
6858	19444	32281	1.84	4.0E-75	11417948	NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1), mRNA
10565	23101	38115	8.22	4.0E-75	7668505	NT	Homo sapiens myosin, heavy polypeptide 1, skeletal muscle, adult (MYH1), mRNA
1040	13650	26162	2.75	3.0E-75	AF157623.1	NT	Homo sapiens HTRA serine protease (PRSS11) gene, complete cds
1041	13650	26162	9.08	3.0E-75	AF157623.1	NT	Homo sapiens HTRA serine protease (PRSS11) gene, complete cds
1878	14462	27019	2.54	3.0E-75	AB011153.1	NT	Homo sapiens mRNA for KIAA0581 protein, partial cds
2158	14735	27308	1.47	3.0E-75	4507334	NT	Homo sapiens synaptobrevin 1 (SYNJ1), mRNA
2497	15034	27601	3.11	3.0E-75	4759153	NT	Homo sapiens synaptosomal-associated protein, 28kD (SNAP29) mRNA
3056	15672	28148	0.65	3.0E-75	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
3223	15635	28313	1.12	3.0E-75	AB011153.1	NT	Homo sapiens mRNA for KIAA0581 protein, partial cds
3393	18001	28480	0.83	3.0E-75	M72393.1	NT	Human calcium-dependent phospholipid-binding protein (PLA2) mRNA, complete cds
3393	18001	28481	0.83	3.0E-75	M72393.1	NT	Human calcium-dependent phospholipid-binding protein (PLA2) mRNA, complete cds
4530	17114	29558	0.87	3.0E-75	7662421	NT	Homo sapiens KIAA0871 protein (KIAA0871), mRNA
5367	17927		0.61	3.0E-75	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
5458	18093	30409	1.01	3.0E-75	11420956	NT	Homo sapiens adaptor-related protein complex 1, sigma 2 subunit (AP1S2), mRNA
5458	18093	30410	1.01	3.0E-75	11420956	NT	Homo sapiens adaptor-related protein complex 1, sigma 2 subunit (AP1S2), mRNA
6867	19601	32432	1.42	3.0E-75	11526318	NT	Homo sapiens HIR (histone cell cycle regulation defective, S. cerevisiae) homolog A (HIRA), mRNA
6867	19601	32433	1.42	3.0E-75	11526318	NT	Homo sapiens HIR (histone cell cycle regulation defective, S. cerevisiae) homolog A (HIRA), mRNA
7189	19721	32568	4.6	3.0E-75	7662209	NT	Homo sapiens KIAA0823 gene product (KIAA0823), mRNA
7189	19721	32569	4.6	3.0E-75	7662209	NT	Homo sapiens KIAA0823 gene product (KIAA0823), mRNA
7618	20131	33006	3.35	3.0E-75	4885632	NT	Homo sapiens Oncogene TIM (TIM) mRNA
7618	20131	33007	3.35	3.0E-75	4885632	NT	Homo sapiens Oncogene TIM (TIM) mRNA
8915	21453	34374	1.23	3.0E-75	11420804	NT	Homo sapiens snail 1 (drosophila homolog), zinc finger protein (SNAI1), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9586	22096	35059	0.85	3.0E-75	11420222	NT	Homo sapiens Drosophila Kelch like protein (DKELCHL), mRNA
10435	22929	35936	3.75	3.0E-75	11436430	NT	Homo sapiens synuclein, alpha (non A4 component of amyloid precursor) (SNCA), mRNA
5853	18477		1.45	2.0E-75	AV734680.1	EST_HUMAN	AV734680 cDNA Homo sapiens cDNA clone cdABED02 5'
8685	21224	34144	2.43	2.0E-75	AI311783.1	EST_HUMAN	q991602.x1 NCL_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1915898 3' similar to TR:Q69386 Q69386 POLJENV GENE
2341	14912	27485	4.05	1.0E-75	AW168135.1	EST_HUMAN	x960d02.x1 NCL_CGAP_U14 Homo sapiens cDNA clone IMAGE:2632707 3' similar to contains PTR7.t1 PTR7 repetitive element
2973	15589	28072	3.23	1.0E-75	X52221.1	NT	H. sapiens ERCC2 gene, exons 1 & 2 (partial)
5356	17918	30331	0.57	1.0E-75	BE894192.1	EST_HUMAN	601437130F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3922303 5'
8353	20893		13.67	1.0E-75	AA399270.1	EST_HUMAN	z157003.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:726485 3' similar to gb:M13932 40S RIBOSOMAL PROTEIN S17 (HUMAN)
9349	21863	34812	4.14	1.0E-75	BF313645.1	EST_HUMAN	601900294F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4129678 5'
9349	21863	34813	4.14	1.0E-75	BF313645.1	EST_HUMAN	601900294F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4129678 5'
10763	23287		6.58	1.0E-75	AA684377.1	EST_HUMAN	ac77b08.s1 Stratagene lung (8937210) Homo sapiens cDNA clone IMAGE:868599 3'
10970	23485	36513	3.06	1.0E-75	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
11945	17918	30331	2.58	1.0E-75	BE894192.1	EST_HUMAN	601437130F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3922303 5'
48	12728	25191	2.19	9.0E-76	AI652648.1	EST_HUMAN	wb30b10.x1 NCL_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2307163 3' similar to TR:O75235 O75235 TRAP1
48	12728	25192	2.19	9.0E-76	AI652648.1	EST_HUMAN	wb30b10.x1 NCL_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2307163 3' similar to TR:O75235 O75235 TRAP1
9815	22313	35294	62.44	9.0E-76	MT2937.1	NT	Human ferritin heavy subunit mRNA, complete cds
154	12817	25305	9	8.0E-76	AF154830.1	NT	Homo sapiens carbamyl phosphate synthetase I mRNA, complete cds
974	13586	26100	10.38	8.0E-76	4504374	NT	Homo sapiens H factor 1 (complement) (HF1) mRNA
974	13586	26101	10.38	8.0E-76	4504374	NT	Homo sapiens H factor 1 (complement) (HF1) mRNA
2935	15551	28028	1.25	8.0E-76	7706724	NT	Homo sapiens mediator (Sur2), mRNA
6319	18926	31703	5.69	8.0E-76	11421442	NT	Homo sapiens LIM domain kinase 1 (LIMK1), mRNA
7500	20022	32885	1.84	8.0E-76	11435215	NT	Homo sapiens serine/threonine kinase 2 (STK2), mRNA
7567	20084	32960	0.94	8.0E-76	11419212	NT	Homo sapiens mitochondrial carrier family protein (LOC55972), mRNA
8237	20778	33699	0.81	8.0E-76	11416961	NT	Homo sapiens AIM-1 protein (LOC51151), mRNA
10280	22775	35764	1.25	8.0E-76	MT13792.1	NT	Human adenosine deaminase (ADA) gene, complete cds
10546	23083	36097	7.29	8.0E-76	10442821	NT	Homo sapiens baculoviral IAP repeat-containing 6 (BIRC6), mRNA
12305	24501		2.28	8.0E-76	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
808	13425	25931	2.84	7.0E-76	5016092	NT	Homo sapiens dihydropyrimidine dehydrogenase (E3 component of pyruvate dehydrogenase complex, 2-oxo-glutarate complex, branched chain keto acid dehydrogenase complex) (DLD) mRNA
3333	15943	28418	3.23	7.0E-76	AF058490.1	NT	Homo sapiens cAMP-specific phosphodiesterase 8A (PDE8A) mRNA, partial cds
3339	15949	28425	5.78	7.0E-76	4505052	NT	Homo sapiens lymphocyte antigen 75 (LY75) mRNA, and translated products
3379	15988	28467	1.89	7.0E-76	4757915	NT	Homo sapiens core-binding factor, runt domain, alpha subunit 2; translocated to, 1; cyclin D-related (CBFA2T1) mRNA
4481	17047	29490	6.32	7.0E-76	4507184	NT	Homo sapiens sepiapterin reductase (7,8-dihydrobiopterin:NADP+ oxidoreductase) (SPR) mRNA
4481	17047	29491	6.32	7.0E-76	4507184	NT	Homo sapiens sepiapterin reductase (7,8-dihydrobiopterin:NADP+ oxidoreductase) (SPR) mRNA
1277	13872	35047	30.59	6.0E-76	BE398253.1	EST_HUMAN	601312019F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3658757 5'
11340	23038	35047	2.97	6.0E-76	BE273201.1	EST_HUMAN	601142253F1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:3506029 5'
1988	14588	27128	8.39	5.0E-76	D63874.1	NT	Human mRNA for HMG-1, complete cds
1986	14588	27129	8.39	5.0E-76	D63874.1	NT	Human mRNA for HMG-1, complete cds
1986	14588	27130	8.39	5.0E-76	D63874.1	NT	Human mRNA for HMG-1, complete cds
3242	15854	28336	0.68	4.0E-76	BE814096.1	EST_HUMAN	QV3-BN0047-270700-283-q06 BN0047 Homo sapiens cDNA
5474	18108	30427	1.22	4.0E-76	BE783412.1	EST_HUMAN	601471725F1 NIH_MGC_87 Homo sapiens cDNA clone IMAGE:3874470 5'
9937	22432	35407	5.78	4.0E-76	D81625.1	EST_HUMAN	HUM178G01B Human fetal brain (TFujiiwara) Homo sapiens cDNA clone GEN-178G01 5'
9937	22432	35408	5.78	4.0E-76	D81625.1	EST_HUMAN	HUM178G01B Human fetal brain (TFujiiwara) Homo sapiens cDNA clone GEN-178G01 5'
657	13280	25759	1.63	3.0E-76	BF516262.1	EST_HUMAN	U1H-BW1-anz-b-04-0-UJ.s1 NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3083862 3'
657	13280	25760	1.63	3.0E-76	BF516262.1	EST_HUMAN	U1H-BW1-anz-b-04-0-UJ.s1 NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3083862 3'
1843	14235	26769	7.45	3.0E-76	4503476	NT	Homo sapiens eukaryotic translation elongation factor 1 beta 2 (EEF1B2) mRNA
1843	14235	26770	7.45	3.0E-76	4503476	NT	Homo sapiens eukaryotic translation elongation factor 1 beta 2 (EEF1B2) mRNA
3476	16082	28555	5.2	3.0E-76	BF375689.1	EST_HUMAN	RC5-ST0300-180100-033-A03 ST0300 Homo sapiens cDNA
3476	16082	28556	5.2	3.0E-76	BF375689.1	EST_HUMAN	RC5-ST0300-180100-033-A03 ST0300 Homo sapiens cDNA
5447	18018	37140	2.41	3.0E-76	Z41314.1	EST_HUMAN	HSCZQD042 normalized infant brain cDNA Homo sapiens cDNA clone c-zqg04 3'
5908	18530	31255	1.08	3.0E-76	AA16081.1	EST_HUMAN	z073c07.r1 Stragene pancreas (#837208) Homo sapiens cDNA clone IMAGE:592524 5' similar to gb:132976 MIXED LINEAGE KINASE 1 (HUMAN);
6506	19106	31891	7.49	3.0E-76	AF286598.1	NT	Homo sapiens angiotensin binding protein 1 mRNA, complete cds
8091	20632	33545	1.03	3.0E-76	N42671.1	EST_HUMAN	W20g10.r1 Soares melanocyte 2NBHM Homo sapiens cDNA clone IMAGE:271842 5'
9632	22132	35097	2.91	3.0E-76	AW268353.1	EST_HUMAN	xs49h01.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2773009 3'
9656	22155	35125	1.11	3.0E-76	AA442309.1	EST_HUMAN	z064d11.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:757481 5'
9656	22155	35126	1.11	3.0E-76	AA442309.1	EST_HUMAN	z064d11.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:757481 5'
11649	24884	30706	1.73	3.0E-76	AW967984.1	EST_HUMAN	EST380059 MAGC resequences, MAGJ Homo sapiens cDNA
11760	25090	30501	4.85	3.0E-76	AW858455.1	EST_HUMAN	EST388525 MAGC resequences, MAGD Homo sapiens cDNA

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
303	12958	25448	1.1	2.0E-76	D84295.1	NT	Human mRNA for possible protein TPRDII, complete cds
364	13013	25495	2.12	2.0E-76	D84295.1	NT	Human mRNA for possible protein TPRDII, complete cds
364	13013	25496	2.12	2.0E-76	D84295.1	NT	Human mRNA for possible protein TPRDII, complete cds
486	13119		1.12	2.0E-76	4557682	NT	Homo sapiens immunoglobulin (CD79A) binding protein 1 (IGBP1) mRNA
616	13243	25717	1.45	2.0E-76	4503944	NT	Homo sapiens glucagon (GCG) mRNA
1088	13673	26186	1.57	2.0E-76	4758053	NT	Homo sapiens cAMP responsive element binding protein 1 (CREB1) mRNA
1583	14176	26708	0.99	2.0E-76	4504028	NT	Homo sapiens GM2 ganglioside activator protein (GM2A) mRNA
1583	14176	26709	0.99	2.0E-76	4504028	NT	Homo sapiens GM2 ganglioside activator protein (GM2A) mRNA
1972	14556	27113	1.04	2.0E-76	AA253954.1	EST_HUMAN	zs60h1.1 s1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:701925 3'
2867	15485	27858	2.64	2.0E-76	P23286	SWISSPROT	OLFATORY RECEPTOR-LIKE PROTEIN F5
3336	15946	28422	2.3	2.0E-76	AA445992.1	EST_HUMAN	zw64e02.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:780986 3' similar to SW:ITB5_HUMAN
3336	15946	28423	2.3	2.0E-76	AA445992.1	EST_HUMAN	P18084 INTEGRIN BETA-5 SUBUNIT PRECURSOR. ;
3832	16431	28893	0.7	2.0E-76	AA400700.1	EST_HUMAN	zw64e02.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:743396 5' similar to WP:R05D3.2
4215	12958	25448	0.62	2.0E-76	D84295.1	NT	CE00281 ;
5082	17655	30096	7.33	2.0E-76	AW879618.1	EST_HUMAN	Human mRNA for possible protein TPRDII, complete cds
5512	18145		0.98	2.0E-76	AF127845.1	NT	QV3-OT0028-220300-132-b11 OT0028 Homo sapiens cDNA
5803	18428	31147	4.95	2.0E-76	AB029004.1	NT	Gorilla gorilla olfactory receptor (GGO18) gene, partial cds
7442	19866	32833	0.72	2.0E-76	11427326	NT	Homo sapiens mRNA for KIAA1081 protein, partial cds
7658	20170	33057	1.84	2.0E-76	11427410	NT	Homo sapiens KIAA0783 gene product (KIAA0783), mRNA
10182	22877	35670	7.63	2.0E-76	11437211	NT	Homo sapiens TPCR86 protein (HSTPCR86P), mRNA
10801	23324	36334	2.79	2.0E-76	7549807	NT	Homo sapiens similar to ribosomal protein S26 (H. sapiens) (LOC63150), mRNA
4385	16972	29420	4.17	1.0E-76	D63874.1	NT	Homo sapiens HIRA interacting protein 4 (dnaj-like) (HIRP4), mRNA
4385	16972	29421	4.17	1.0E-76	D63874.1	NT	Human mRNA for HMG-1, complete cds
5639	18298	30741	5.55	1.0E-76	BE796537.1	EST_HUMAN	Human mRNA for HMG-1, complete cds
6391	18994		0.7	1.0E-76	AA333207.1	EST_HUMAN	601589898F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3944302 5'
7003	19501	32320	4.41	9.0E-77	BE889525.1	EST_HUMAN	EST37301 Embryo, 8 week 1 Homo sapiens cDNA 5' end
11115	23625	36667	1.68	9.0E-77	4506022	NT	601512435F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913737 5'
12474	24599		1.9	9.0E-77	BE410354.1	EST_HUMAN	Homo sapiens protein phosphatase 2, regulatory subunit B (B56), gamma isoform (PPP2R5C) mRNA
200	12860	25344	1.36	8.0E-77	R83144.1	EST_HUMAN	601302333F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3636753 5'
							yp11h02.1 Soares breast 3NbHst Homo sapiens cDNA clone IMAGE:187155 5' similar to
							SP-ANKB_HUMAN Q01484 ANKYRIN, BRAIN VARIANT 1 ;



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4620	17203	29652	1.27	8.0E-77	BF205181.1	EST_HUMAN	60186929F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4109503 5'
5644	18273	30747	2.93	8.0E-77	4506230	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, non-ATPase, 7 (Moy34 homolog) (PSMD7) mRNA
11264	23792	36849	2.67	8.0E-77	AA019770.1	EST_HUMAN	ze62e02.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:363578 5'
11264	23792	36850	2.67	8.0E-77	AA019770.1	EST_HUMAN	ze62e02.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:363578 5'
12451	24585	30916	21.88	8.0E-77	R00245.1	EST_HUMAN	ye69f04.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:123007 3' similar to contains MER10 repetitive element
1973	14557	27114	2.58	7.0E-77	AA625755.1	EST_HUMAN	zu81g01.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:745392 3'
2455	15022	27593	1.98	7.0E-77	4505944	NT	Homo sapiens polymerase (RNA) II (DNA directed) polypeptide E (25kD) (POLR2E) mRNA
2455	15022	27594	1.98	7.0E-77	4505944	NT	Homo sapiens polymerase (RNA) II (DNA directed) polypeptide E (25kD) (POLR2E) mRNA
284	12940	25426	3.52	6.0E-77	4504600	NT	Homo sapiens Interferon (alpha, beta and omega) receptor 2 (IFNAR2) mRNA
1181	13783	26263	3.04	6.0E-77	AW957753.1	EST_HUMAN	EST369823 MAGE resequences, MAGE Homo sapiens cDNA
1580	14183	26716	2.97	6.0E-77	AI204066.1	EST_HUMAN	qe7h12.x1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1745063 3'
156	12819	25307	3.77	5.0E-77	AF154830.1	NT	Homo sapiens carbamyl phosphate synthetase I mRNA, complete cds
156	12819	25308	3.77	5.0E-77	AF154830.1	NT	Homo sapiens carbamyl phosphate synthetase I mRNA, complete cds
1278	13674	26394	1.69	5.0E-77	AF041015.1	NT	7 Homo sapiens glucokinase (GCK) gene, exon 2
1404	13997	26528	1.53	5.0E-77	4557250	NT	Homo sapiens disintegrin and metalloprotease domain 10 (ADAM10) mRNA
2792	15345	27814	0.98	5.0E-77	4503160	NT	Homo sapiens cullin 1 (CUL1) mRNA
3574	16178	28661	1.03	5.0E-77	8394518	NT	Homo sapiens ubiquitin specific protease 18 (USP18) mRNA
4813	17391	29842	1.08	5.0E-77	5031660	NT	Homo sapiens EGF-like repeats and discoidin I-like domains 3 (EDIL3), mRNA
4813	17391	29843	1.08	5.0E-77	5031660	NT	Homo sapiens EGF-like repeats and discoidin I-like domains 3 (EDIL3), mRNA
5071	17644	30086	2.22	5.0E-77	AL043953.1	EST_HUMAN	DKFZp434G1728_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434G1728 5'
5419	17976	30384	1.77	5.0E-77	AA861184.1	EST_HUMAN	ek33a05.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1407728 3' similar to contains Alu repetitive element, contains element PTR7 PTR7 repetitive element
6379	19613	32447	0.71	5.0E-77	M13975.1	NT	Homo sapiens protein kinase C beta-II type (PRKCB1) mRNA, complete cds
7366	19892	32755	0.88	5.0E-77	X88296.1	NT	H. sapiens mRNA for ubiquitin hydrolase
7592	19892	32755	0.75	5.0E-77	X88296.1	NT	H. sapiens mRNA for ubiquitin hydrolase
8309	20850	33773	1.07	5.0E-77	11428849	NT	Homo sapiens 3-hydroxyisobutyryl-Coenzyme A hydrolase (HIBCH), mRNA
8309	20850	33774	1.07	5.0E-77	11428849	NT	Homo sapiens 3-hydroxyisobutyryl-Coenzyme A hydrolase (HIBCH), mRNA
9489	21845	34893	3.52	5.0E-77	11421928	NT	Homo sapiens sorting nexin 5 (SNX5), mRNA
9489	21845	34894	3.52	5.0E-77	11421928	NT	Homo sapiens sorting nexin 5 (SNX5), mRNA
10385	22879	35872	0.51	5.0E-77	AB002297.1	NT	Human mRNA for KIAA0289 gene, partial cds
10385	22879	35873	0.51	5.0E-77	AB002297.1	NT	Human mRNA for KIAA0289 gene, partial cds
2015	14597	27160	1.12	3.0E-77	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2015	14597	27161	1.12	3.0E-77	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
10189	22684	35675	0.82	3.0E-77	H65167.1	EST_HUMAN	yu64g01.r1 Weizmann Olfactory Epithelium Homo sapiens cDNA clone IMAGE:238608 5' similar to SP:S17447 S17447 PROBABLE LIGAND-BINDING PROTEIN RY2G5 -;
10189	22684	35676	0.82	3.0E-77	H65167.1	EST_HUMAN	yu64g01.r1 Weizmann Olfactory Epithelium Homo sapiens cDNA clone IMAGE:238608 5' similar to SP:S17447 S17447 PROBABLE LIGAND-BINDING PROTEIN RY2G5 -;
10493	22987	35994	0.51	3.0E-77	A1017333.1	EST_HUMAN	ov31h07.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1638973 3'
10493	22987	35995	0.51	3.0E-77	A1017333.1	EST_HUMAN	ov31h07.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1638973 3'
10754	23278	36291	4.39	3.0E-77	BF359917.1	EST_HUMAN	PM3-MT0078-080800-005-g03 MT0078 Homo sapiens cDNA
1396	13990	28517	1.82	2.0E-77	AV764617.1	EST_HUMAN	AV764617 MDS Homo sapiens cDNA clone MDSBTF10 5'
1479	14072	26611	3.43	2.0E-77	AW967712.1	EST_HUMAN	RC3-BN0053-170200-011-h01 BN0053 Homo sapiens cDNA
2138	14716	27288	1.24	2.0E-77	L41825.1	NT	Homo sapiens CYP17 gene, 5' end
2151	14728	27301	2.37	2.0E-77	7706315	NT	Homo sapiens CGI-79 protein (LOC51634), mRNA
2630	15471	27760	2.26	2.0E-77	AB037836.1	NT	Homo sapiens mRNA for KIAA1415 protein, partial cds
2630	15471	27761	2.28	2.0E-77	AB037836.1	NT	Homo sapiens mRNA for KIAA1415 protein, partial cds
4105	16699	29153	1.36	2.0E-77	BE044316.1	EST_HUMAN	ho43b05.x1 Soares_NFL_T_GBC S1 Homo sapiens cDNA clone IMAGE:3040113 3' similar to SW:GAG2_HUMAN P10264 RETROVIRUS-RELATED GAG POLYPROTEIN ;
4504	17088	29536	0.85	2.0E-77	AI613518.1	EST_HUMAN	hw22g02.x1 NCL_CGAP_Bm52 Homo sapiens cDNA clone IMAGE:2260466 3' similar to TR:O65245
4504	17088	29537	0.85	2.0E-77	AI613519.1	EST_HUMAN	hw22g02.x1 NCL_CGAP_Bm52 Homo sapiens cDNA clone IMAGE:2260466 3' similar to TR:O65245
4701	17283		1.38	2.0E-77	4504068	NT	Homo sapiens glutamic-oxaloacetic transaminase 2, mitochondrial (aspartate aminotransferase 2) (GOT2), nuclear gene encoding mitochondrial protein, mRNA
4883	17458	29910	4.3	2.0E-77	AA653025.1	EST_HUMAN	ns58g12.s1 NCL_CGAP_P12 Homo sapiens cDNA clone IMAGE:1188838 similar to SW:RL29_HUMAN P47914 60S RIBOSOMAL PROTEIN L29. [1]; contains element MSR1 repetitive element ;
6109	18725	31478	1.78	2.0E-77	BE298940.1	EST_HUMAN	601119852F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3029436 5'
6320	18927	31704	1.68	2.0E-77	BE787143.1	EST_HUMAN	601476802F1 NIH_MGC_88 Homo sapiens cDNA clone IMAGE:3879505 5'
7226	19757	32612	14.03	2.0E-77	AI833003.1	EST_HUMAN	ai74a09.x1 Barstead colon HPLRB7 Homo sapiens cDNA clone IMAGE:2377720 3' similar to TR:Q13311 Q13311 TAX1-BINDING PROTEIN TXBP151. [1];
8466	21006	33924	0.9	2.0E-77	A1362707.1	EST_HUMAN	qy70c09.x1 NCL_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2017360 3' similar to WP:F29D11.1
9447	21973	34924	4.56	2.0E-77	U50321.1	NT	CE057655 LOW DENSITY LIPID RECEPTOR-RELATED PROTEIN ;
9447	21973	34925	4.56	2.0E-77	U50321.1	NT	Human protein kinase C substrate 80K-H (PRKCSH) gene, exon 7
9606	22403	35377	0.55	2.0E-77	BF310349.1	EST_HUMAN	Human protein kinase C substrate 80K-H (PRKCSH) gene, exon 7

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9806	22403	35378	0.55	2.0E-77	BF310349.1	EST_HUMAN	601895183F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4124541 5'
47	12726	25187	1.39	1.0E-77	AB033102.1	NT	Homo sapiens mRNA for KIAA1276 protein, partial cds
47	12726	25188	1.39	1.0E-77	AB033102.1	NT	Homo sapiens mRNA for KIAA1276 protein, partial cds
294	12850	25437	2.09	1.0E-77	4502168	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
294	12850	25438	2.09	1.0E-77	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
908	15428	26041	2.96	1.0E-77	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
908	15428	26042	2.96	1.0E-77	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
1963	14547	27104	1.41	1.0E-77	AW058119.1	EST_HUMAN	w83605.x1 Soares_thymus_NHFTb Homo sapiens cDNA clone IMAGE:2538160 3'
2488	15053	27625	0.99	1.0E-77	AB028024.1	NT	Homo sapiens mRNA for KIAA1101 protein, complete cds
3081	15696	28168	2.82	1.0E-77	4503300	NT	Homo sapiens 2,4-dienoyl CoA reductase 1, mitochondrial (DECR1), mRNA
4445	17031	29472	3.95	1.0E-77	7706299	NT	Homo sapiens CGI-60 protein (LOC51626), mRNA
4622	17205	29854	20.39	1.0E-77	AJ228041.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22; segment 1/3
4755	17336	29780	3.41	1.0E-77	6552322	NT	Homo sapiens breast cancer 1, early onset (BRCA1), transcript variant BRCA1-exon4, mRNA
5098	17180	29627	0.59	1.0E-77	4758053	NT	Homo sapiens cAMP responsive element binding protein 1 (CREB1) mRNA
5228	17792	30211	1.05	1.0E-77	7661849	NT	Homo sapiens KIAA0005 gene product (KIAA0005), mRNA
5228	17792	30212	1.05	1.0E-77	7661849	NT	Homo sapiens KIAA0005 gene product (KIAA0005), mRNA
5387	17946		4.13	1.0E-77	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
6086	18702	31449	1.46	1.0E-77	AF086944.1	NT	Homo sapiens dynactin 1 (DCTN1) gene, exons 27 and 28
6086	18702	31450	1.46	1.0E-77	AF086944.1	NT	Homo sapiens dynactin 1 (DCTN1) gene, exons 27 and 28
6198	18808	31577	1.4	1.0E-77	M25944.1	NT	Human von Willebrand factor gene, exon 20
6575	19173	31972	1.45	1.0E-77	4885182	NT	Homo sapiens diaphanous (Drosophila, homolog) 1 (DIAPH1), mRNA
7114	19454	32270	15.68	1.0E-77	5981412	NT	Homo sapiens elastin (supravalvular aortic stenosis, Williams-Beuren syndrome) (ELN), mRNA
7661	20173	33060	0.92	1.0E-77	11420159	NT	Homo sapiens cullin 1 (CUL1), mRNA
7740	20248	33141	0.78	1.0E-77	X04571.1	NT	Human mRNA for kidney epidermal growth factor (EGF) precursor
9189	21706	34649	1.31	1.0E-77	X94354.1	NT	H. sapiens DNA for Cone cGMP-PDE gene
9189	21706	34650	1.31	1.0E-77	X94354.1	NT	H. sapiens DNA for Cone cGMP-PDE gene
10416	22810	35909	1.01	1.0E-77	AB028396.1	NT	Homo sapiens hu-GlcAT-P mRNA for glucuronyltransferase, complete cds
10416	22810	35910	1.01	1.0E-77	AB028396.1	NT	Homo sapiens hu-GlcAT-P mRNA for glucuronyltransferase, complete cds
10556	23471	36496	2.92	1.0E-77	11433426	NT	Homo sapiens meningioma expressed antigen 6 (coiled-coil proline-rich) (MGEA6), mRNA
10444	22938	35948	2.4	9.0E-78	AW753302.1	EST_HUMAN	RC3-C70254-280989-011-b05 C70254 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6574	19172	31970	4.74	8.0E-78	AW947061.1	EST_HUMAN	RC2-ET0023-080500-012-005 ET0023 Homo sapiens cDNA
6574	19172	31971	4.74	8.0E-78	AW947061.1	EST_HUMAN	RC2-ET0023-080500-012-005 ET0023 Homo sapiens cDNA
89	12765	25248	1.48	6.0E-78	AU118789.1	EST_HUMAN	AU118789 HEMBA1 Homo sapiens cDNA clone HEMBA1004354 5'
89	12765	25249	1.48	6.0E-78	AU118789.1	EST_HUMAN	AU118789 HEMBA1 Homo sapiens cDNA clone HEMBA1004354 5'
3356	15964	28441	0.72	6.0E-78	BF344101.1	EST_HUMAN	602016926F1 NCI_CGAP_Brm84 Homo sapiens cDNA clone IMAGE:4152511 5'
6677	19273		2.29	6.0E-78	11432710	NT	Homo sapiens GDNF family receptor alpha 1 (GFRA1), mRNA
234	12894	25377	4.78	5.0E-78	11422486	NT	Homo sapiens hypothetical protein FLJ11316 (FLJ11316), mRNA
2597	15159	27727	4.1	5.0E-78	AW673424.1	EST_HUMAN	ba54h03 y9 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:2900405 5' similar to WP.Y48B6A.6
3432	16040	28522	3.88	5.0E-78	M55586.1	NT	CE22121
5607	18236	30686	2.29	5.0E-78	AF038536.1	NT	Human collagenase type IV (CLG4) gene, exon 6
5764	18390	31102	24.58	5.0E-78	11416585	NT	Homo sapiens Best's macular dystrophy related protein mRNA, partial cds
7208	19739	32593	2.2	5.0E-78	AW953120.1	EST_HUMAN	Homo sapiens transforming growth factor, beta-induced, 68kD (TGFB1), mRNA
9012	21549	34478	6.88	5.0E-78	U60889.1	NT	EST365190 MAGE resequences, MAGB Homo sapiens cDNA
9013	21550	34479	3.6	5.0E-78	BE960336.1	EST_HUMAN	Human lysosomal alpha-mannosidase (manB) gene, exon 7
1176	13778	26288	1.64	4.0E-78	AL043314.2	EST_HUMAN	601649061F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:3931887 5'
1565	14157	26688	1.99	4.0E-78	AL355841.1	NT	DKFZp434N0323_1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434N0323 5'
2357	14928	27502	2.97	4.0E-78	AF107405.1	NT	Novel human gene mapping to chromosome 22
4414	16989	29441	1.23	4.0E-78	7656876	NT	Homo sapiens pre-mRNA splicing factor (SFRS3) mRNA, complete cds
4887	17482	29915	1.91	4.0E-78	4505606	NT	Homo sapiens syncytin (LOC30816), mRNA
4887	17482	29916	1.91	4.0E-78	4505606	NT	Homo sapiens phosphatidylinositol 4-kinase, catalytic, alpha polypeptide (PIK4CA) mRNA
5941	18561	31290	0.97	4.0E-78	11420732	NT	Homo sapiens phosphatidylinositol 4-kinase, catalytic, alpha polypeptide (PIK4CA) mRNA
7502	20024	32888	0.77	4.0E-78	4506736	NT	Homo sapiens SFRS3 protein kinase 2 (SRPK2), mRNA
8787	21326	34250	1.51	4.0E-78	AF012872.1	NT	Homo sapiens ribosomal protein S6 kinase, 70kD, polypeptide 1 (RPS6KB1) mRNA
8787	21326	34251	1.51	4.0E-78	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (pi4K230) mRNA, complete cds
9290	21890	34837	0.61	4.0E-78	11417251	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (pi4K230) mRNA, complete cds
10341	22835	35829	2.03	4.0E-78	11560151	NT	Homo sapiens X-ray repair complementing defective repair in Chinese hamster cells 4 (XRCC4), mRNA
10341	22835	35830	2.03	4.0E-78	11560151	NT	Homo sapiens hypothetical C2H2 zinc finger protein FLJ22504 (FLJ22504), mRNA
10641	23173	36185	1.67	4.0E-78	11426610	NT	Homo sapiens hypothetical C2H2 zinc finger protein FLJ22504 (FLJ22504), mRNA
11297	23749	36806	2.09	4.0E-78	AF169148.1	NT	Homo sapiens regulatory factor X-associated ankyrin-containing protein (RFXANK), mRNA
11432	23882	36948	4.15	4.0E-78	X05844.1	NT	Homo sapiens s-CaBP1 (CABP1) mRNA, complete cds
12337	24520	30923	4.98	4.0E-78	AB011399.1	NT	Human transforming growth factor-beta precursor gene exons 4-5 (and joined mature peptide)
172	12835	25318	2.42	3.0E-78	AF095901.1	NT	Homo sapiens gene for AF-6, complete cds
							Homo sapiens eRF1 gene, complete cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
172	12835	25319	2.42	3.0E-78	AF05901.1	NT	Homo sapiens eRF1 gene, complete cds
3827	18427		1.15	3.0E-78	AU140604.1	EST_HUMAN	AU140604 PLACE3 Homo sapiens cDNA clone PLACE3000373 5'
4180	18488	28947	0.76	3.0E-78	4507334	NT	Homo sapiens synaptotagmin 1 (SYNJ1), mRNA
10188	22881		5.76	3.0E-78	BE144758.1	EST_HUMAN	CMO-H10180-041099-065-c07 HT0180 Homo sapiens cDNA
10860	23381	38400	5.65	3.0E-78	BE156318.1	EST_HUMAN	QVO-HT0367-150200-114-g09 HT0367 Homo sapiens cDNA
3155	15769		2.54	2.0E-78	U04489.1	NT	Homo sapiens type IV collagen alpha 5 chain (COL4A5) gene, exon 20
4088	16882		1.8	2.0E-78	AA311872.1	EST_HUMAN	EST182583 Jurkat T-cells VI Homo sapiens cDNA 5' end
7483	20006	32870	1.38	2.0E-78	AW402306.1	EST_HUMAN	UI-HF-BKO-aa-g-10-0-UI.r1 NIH_MGC_38 Homo sapiens cDNA clone IMAGE:3054139 5'
7483	20006	32871	1.38	2.0E-78	AW402306.1	EST_HUMAN	UI-HF-BKO-aa-g-10-0-UI.r1 NIH_MGC_38 Homo sapiens cDNA clone IMAGE:3054139 5'
7714	20223	33110	3.47	2.0E-78	BF689800.1	EST_HUMAN	602186529F1 NIH_MGC_49 Homo sapiens cDNA clone IMAGE:4288599 5'
7994	20528	33432	1.73	2.0E-78	AV714177.1	EST_HUMAN	AV714177 DCB Homo sapiens cDNA clone DCBAWF09 5'
8389	20929	33848	1.8	2.0E-78	AI557509.1	EST_HUMAN	P2.1_16_B07.r tumor2 Homo sapiens cDNA 3'
8389	20929	33848	1.8	2.0E-78	AI557509.1	EST_HUMAN	P2.1_16_B07.r tumor2 Homo sapiens cDNA 3'
10959	23474	38499	3.39	2.0E-78	AI197837.1	EST_HUMAN	q150h05.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:1859961 3' similar to WP.R60.1
11003	23517	36552	3.47	2.0E-78	N68951.1	EST_HUMAN	CE06325 PROTEIN KINASE
5508	18141	30553	2.83	1.0E-78	11417304	NT	z44812.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:285823 3'
7035	18055	30478	1.91	1.0E-78	AV648699.1	EST_HUMAN	Homo sapiens GAP-like protein (LOC51308), mRNA
8100	20841		2.25	1.0E-78	U52373.1	NT	AV648699 GLC Homo sapiens cDNA clone GLCBMC01 3'
11832	24197	31037	2.17	1.0E-78	11430450	NT	Human serine/threonine kinase MNB (mnb) mRNA, complete cds
11928	24261	31014	1.41	1.0E-78	11435903	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
4808	17386	28836	4.05	9.0E-79	11525891	NT	Homo sapiens similar to lymphocyte activation-associated protein (H. sapiens) (LOC83140), mRNA
4868	17562	30006	3.34	9.0E-79	BE000837.1	EST_HUMAN	Homo sapiens peptide YY (PYY), mRNA
5624	18253	30722	13.77	9.0E-79	AB028070.1	NT	RC2-BN0074-090300-014-c12 BN0074 Homo sapiens cDNA
6482	19083	31864	2.48	9.0E-79	5454148	NT	Homo sapiens mRNA for activator of S phase Kinase, complete cds
6731	19325	32128	1.43	9.0E-79	11430822	NT	Homo sapiens ubiquitin-conjugating enzyme E2E 3 (homologous to yeast UBC4/5) (UBE2E3) mRNA
7388	24781		0.98	9.0E-79	11424427	NT	Homo sapiens hypothetical protein FLJ11294 (FLJ11294), mRNA
7575	20091	32868	0.89	9.0E-79	11421735	NT	Homo sapiens hypothetical protein FLJ20345 (FLJ20345), mRNA
7575	20091	32869	0.89	9.0E-79	11421735	NT	Homo sapiens cAMP response element-binding protein CRE-BPa (H_GS165L15.1), mRNA
7612	20125	33002	0.72	9.0E-79	D30658.1	NT	Homo sapiens cAMP response element-binding protein CRE-BPa (H_GS165L15.1), mRNA
8287	20828	33748	0.56	9.0E-79	11417260	NT	Human T-cell mRNA for glycyl RNA synthetase, complete cds
8287	20828	33748	0.56	9.0E-79	11417260	NT	Homo sapiens threonyl-tRNA synthetase (TARS), mRNA
8287	20828	33748	0.56	9.0E-79	11417260	NT	Homo sapiens threonyl-tRNA synthetase (TARS), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8993	21531	34460	7.08	9.0E-79	J02853.1	NT	Homo sapiens casein kinase II alpha subunit mRNA, complete cds
8993	21531	34461	7.08	9.0E-79	J02853.1	NT	Homo sapiens casein kinase II alpha subunit mRNA, complete cds
9302	21902	34851	0.61	9.0E-79	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
10267	22762	35749	0.59	9.0E-79	11438643	NT	Homo sapiens hypothetical protein FLJ20535 (FLJ20535), mRNA
10316	22810	35803	2.32	9.0E-79	AF062346.1	NT	Homo sapiens zinc finger protein 216 splice variant 1 (ZNF216), mRNA, complete cds
10316	22810	35804	2.32	9.0E-79	AF062346.1	NT	Homo sapiens zinc finger protein 216 splice variant 1 (ZNF216) mRNA, complete cds
10946	23462	36484	2.73	9.0E-79	AY008273.1	NT	Homo sapiens TRAF6-regulated IKK activator 1 beta Uev1A mRNA, complete cds
11388	23840	36904	3.26	9.0E-79	11423827	NT	Homo sapiens suppressor of white apricot homolog 2 (SWAP2), mRNA
11388	23840	36905	3.26	9.0E-79	11423827	NT	Homo sapiens suppressor of white apricot homolog 2 (SWAP2), mRNA
12549	24654	30900	2.05	9.0E-79	11417877	NT	Homo sapiens gamma-glutamyl transferase 1 (GGT1), mRNA
3805	16405	28869	1.17	8.0E-79	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
11747	18035	30495	1.3	8.0E-79	8567387	NT	Homo sapiens period (Drosophila) homolog 3 (PER3), mRNA
3291	15802	28382	10.29	7.0E-79	BE619648.1	EST_HUMAN	601472766T1 NIH_MGC_88 Homo sapiens cDNA clone IMAGE:3875657 3'
11676	24095		2.07	6.0E-79	AA699829.1	EST_HUMAN	zj94a04.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:4101245 3' similar to TR:Q15408 Q15408 NEUTRAL PROTEASE LARGE SUBUNIT ;
11368	23820	36882	3.85	5.0E-79	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21C082
5159	17728	30157	2.24	4.0E-79	BF210869.1	EST_HUMAN	601874522F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4101245 5'
335	12987	25474	2.46	3.0E-79	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
1014	13624	26139	4.44	3.0E-79	AF232708.1	NT	Homo sapiens cell-line tsA201a chloride ion current inducer protein (Cln) gene, complete cds
3133	15747	28216	1.91	3.0E-79	U09410.1	NT	Human zinc finger protein ZNF131 mRNA, partial cds
5292	17854	30278	0.94	3.0E-79	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
5292	17854	30279	0.94	3.0E-79	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
5584	18195	30641	8.78	3.0E-79	AF110322.1	NT	Homo sapiens MSTP016 (MST016) mRNA, complete cds
5898	18520	31245	1.72	3.0E-79	AB020699.1	NT	Homo sapiens mRNA for KIAA0892 protein, partial cds
5922	18544	31270	1.01	3.0E-79	BE789470.1	EST_HUMAN	601482143F1 NIH_MGC_88 Homo sapiens cDNA clone IMAGE:3884554 5'
5922	18544	31271	1.01	3.0E-79	BE789470.1	EST_HUMAN	601482143F1 NIH_MGC_88 Homo sapiens cDNA clone IMAGE:3884554 5'
5942	18562	31291	3.6	3.0E-79	11426770	NT	Homo sapiens netrin 1 (NTN1), mRNA
5942	18562	31292	3.6	3.0E-79	11426770	NT	Homo sapiens netrin 1 (NTN1), mRNA
6843	19433	32248	0.76	3.0E-79	BE256893.1	EST_HUMAN	601112055F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3352885 5'
7120	19480	32275	3.07	3.0E-79	AB014520.1	NT	Homo sapiens mRNA for KIAA0620 protein, partial cds
7120	19480	32276	3.07	3.0E-79	AB014520.1	NT	Homo sapiens mRNA for KIAA0620 protein, partial cds
8105	20646	33555	1.58	3.0E-79	AF249273.1	NT	Homo sapiens Bcl-2-associated transcription factor short form mRNA, complete cds
9324	21838	34789	0.71	3.0E-79	10835036	NT	Homo sapiens tetrahydropeptide repeat domain 3 (TTTC3), mRNA
10249	22744		0.62	3.0E-79	AV698115.1	EST_HUMAN	AV698115 GKC Homo sapiens cDNA clone GKCAHE11 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10740	23265	36280	1.97	3.0E-79	AF249273.1	NT	Homo sapiens Bcl-2-associated transcription factor short form mRNA, complete cds
10740	23265	36281	1.97	3.0E-79	AF249273.1	NT	Homo sapiens Bcl-2-associated transcription factor short form mRNA, complete cds
309	12964		1.05	2.0E-79	H63126.1	EST_HUMAN	yr48f03.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:208541 3'
682	13288	25787	1.38	2.0E-79	BE379926.1	EST_HUMAN	601159415F2 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3511107 5'
963	13574	26090	0.94	2.0E-79	4757841	NT	Homo sapiens BCL2-like 2 (BCL2L2) mRNA
1020	13630	26145	0.91	2.0E-79	4885234	NT	Homo sapiens Gardner-Rasheed feline sarcoma viral (v-fgr) oncogene homolog (FGR) mRNA
1020	13630	26146	0.91	2.0E-79	4885234	NT	Homo sapiens Gardner-Rasheed feline sarcoma viral (v-fgr) oncogene homolog (FGR) mRNA
1073	13678		1.06	2.0E-79	AI523747.1	EST_HUMAN	th18h07.x1 NCJ CGAP_P128 Homo sapiens cDNA clone IMAGE:2118885 3'
1824	14413	26958	1.21	2.0E-79	7657024	NT	Homo sapiens Dickkopf gene 4 (DKK-4), mRNA
1824	14413	26959	1.21	2.0E-79	7657024	NT	Homo sapiens Dickkopf gene 4 (DKK-4), mRNA
1918	14503	27060	1.01	2.0E-79	7662255	NT	Homo sapiens KIAA0703 gene product (KIAA0703), mRNA
2193	14769	27341	10.76	2.0E-79	4585863	NT	Homo sapiens phosphodiesterase 6A, cGMP-specific, rod, alpha (PDE6A), mRNA
2193	14769	27342	10.76	2.0E-79	4585863	NT	Homo sapiens phosphodiesterase 6A, cGMP-specific, rod, alpha (PDE6A), mRNA
2352	14923	27498	2.42	2.0E-79	AF244138.1	NT	Homo sapiens hepatocellular carcinoma-associated antigen 88 (HCA88) mRNA, complete cds
2741	15296	27863	0.89	2.0E-79	AB023154.1	NT	Homo sapiens mRNA for KIAA0937 protein, partial cds
3985	16583	29054	0.65	2.0E-79	AF170492.1	NT	Homo sapiens chloride channel CLC4 (CLC4) mRNA, complete cds
4245	16833	29284	1.24	2.0E-79	AJ271408.1	NT	Homo sapiens mRNA for Fas-associated factor FAF1 (Faf1 gene)
4800	17378	29828	0.62	2.0E-79	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C006
5851	18475		1.16	2.0E-79	AA312223.1	EST_HUMAN	EST182926 Jurkat T-cells VI Homo sapiens cDNA 5' end similar to C. elegans hypothetical protein, cosmid B0303.15
5901	18523	31248	0.9	2.0E-79	11181769	NT	Homo sapiens X transporter protein 3 (XT3), mRNA
6390	18993	31773	1.1	2.0E-79	AB020637.1	NT	Homo sapiens mRNA for KIAA0830 protein, partial cds
7040	18060	30482	0.96	2.0E-79	AF263613.1	NT	Homo sapiens membrane-associated calcium-independent phospholipase A2 gamma mRNA, complete cds
7219	19750	32605	1.76	2.0E-79	7382479	NT	Homo sapiens Rho GTPase activating protein 6 (ARHGAP6), transcript variant 4, mRNA
7219	19750	32606	1.76	2.0E-79	7382479	NT	Homo sapiens Rho GTPase activating protein 6 (ARHGAP6), transcript variant 4, mRNA
8044	20586	33492	1.22	2.0E-79	4506442	NT	Homo sapiens retinoblastoma-like 1 (p107) (RBL1) mRNA
8454	20994	33912	2.52	2.0E-79	11427428	NT	Homo sapiens hypothetical protein FLJ11006 (FLJ11006), mRNA
8701	21240	34163	0.55	2.0E-79	8923248	NT	Homo sapiens hypothetical protein FLJ20275 (FLJ20275), mRNA
8701	21240	34164	0.55	2.0E-79	8923248	NT	Homo sapiens hypothetical protein FLJ20275 (FLJ20275), mRNA
8934	21472	34391	0.99	2.0E-79	11432184	NT	Homo sapiens similar to ATPase, H+ transporting, lysosomal (vacuolar proton pump) membrane sector associated protein M8-9 (H. sapiens) (LOC63981), mRNA
10004	22489	35488	1.94	2.0E-79	S72869.1	NT	H4(D10S170)-putative cytoskeletal protein [human, thyroid, mRNA, 3011 nt]
10004	22499	35489	1.94	2.0E-79	S72869.1	NT	H4(D10S170)-putative cytoskeletal protein [human, thyroid, mRNA, 3011 nt]

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10908	23427	36444	5.07	2.0E-79	BE064386.1	EST_HUMAN	RC4-BT0310-110300-015-f10 BT0310 Homo sapiens cDNA
10908	23427	36445	5.07	2.0E-79	BE064386.1	EST_HUMAN	RC4-BT0310-110300-015-f10 BT0310 Homo sapiens cDNA
11716	18033	30493	5.59	2.0E-79	7662357	NT	Homo sapiens KIAA0879 protein (KIAA0879), mRNA
11806	24181	31029	5.85	2.0E-79	AB020640.1	NT	Homo sapiens mRNA for KIAA0833 protein, partial cds
12038	24326	30894	2.81	2.0E-79	11418322	NT	Homo sapiens cadherin EGF LAG seven-pass G-type receptor 1 (CELSR1), mRNA
6701	24766		3.27	1.0E-79	BF363071.1	EST_HUMAN	MRO-NN0087-260600-017-b10 NN0087 Homo sapiens cDNA
8187	20728	33640	0.74	1.0E-79	BE394211.1	EST_HUMAN	QV2-HT0540-120900-358-a05 HT0540 Homo sapiens cDNA
11487	23936	37006	2.11	1.0E-79	BF087405.1	EST_HUMAN	60131151F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3632909 5'
11834	25021		1.84	1.0E-79	AI460115.1	EST_HUMAN	ar79a04.x1 Barstead colon HPLRB7 Homo sapiens cDNA clone IMAGE:2151438 3'
3180	15793	28264	5.7	9.0E-80	AA725848.1	EST_HUMAN	ai23a05.s1 Soares testis NHT Homo sapiens cDNA clone 1343848 3'
3180	15793	28265	5.7	9.0E-80	AA725848.1	EST_HUMAN	ai23a05.s1 Soares testis NHT Homo sapiens cDNA clone 1343848 3'
9926	22422	35396	1.33	9.0E-80	BE798603.1	EST_HUMAN	601581632F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3936061 5'
11156	23663	36708	11.44	9.0E-80	11433924	NT	Homo sapiens solute carrier family 7 (cationic amino acid transporter, y <sup>+</sup> system), member 8 (SLC7A8), mRNA
11156	23663	36709	11.44	9.0E-80	11433924	NT	Homo sapiens solute carrier family 7 (cationic amino acid transporter, y <sup>+</sup> system), member 8 (SLC7A8), mRNA
3662	16264		1.19	8.0E-80	U94387.1	NT	Homo sapiens Y chromosome spermatogenesis candidate protein (RBM) pseudogene mRNA, partial cds
7600	20113	32969	2.92	8.0E-80	11422647	NT	Homo sapiens KIAA0724 gene product (KIAA0724), mRNA
7600	20113	32990	2.92	8.0E-80	11422647	NT	Homo sapiens KIAA0724 gene product (KIAA0724), mRNA
9323	21837	34787	1.07	8.0E-80	6005921	NT	Homo sapiens triple functional domain (PTPRF interacting) (TRIO), mRNA
9323	21837	34788	1.07	8.0E-80	6005921	NT	Homo sapiens triple functional domain (PTPRF interacting) (TRIO), mRNA
933	13546	26063	1.84	6.0E-80	AI422197.1	EST_HUMAN	tf58d02.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:2103459 3' similar to SW:NUJEM_HUMAN Q16795 NADH-UBIQUINONE OXIDOREDUCTASE 39 KD SUBUNIT PRECURSOR :
1685	14277	26810	2.29	6.0E-80	U64898.1	NT	Homo sapiens NRD convertase mRNA, complete cds
2337	14908	27479	2.88	6.0E-80	6631094	NT	Homo sapiens minichromosome maintenance deficient (S. cerevisiae) 3 (MCM3), mRNA
2337	14908	27480	2.88	6.0E-80	6631094	NT	Homo sapiens minichromosome maintenance deficient (S. cerevisiae) 3 (MCM3), mRNA
4372	16959	29403	0.98	6.0E-80	AB032981.1	NT	Homo sapiens mRNA for KIAA1155 protein, partial cds
4372	16959	29404	0.98	6.0E-80	AB032981.1	NT	Homo sapiens mRNA for KIAA1155 protein, partial cds
5969	18590	31325	2.15	6.0E-80	11421462	NT	Homo sapiens malate dehydrogenase 2, NAD (mitochondrial) (MDH2), mRNA
6226	18835	31608	3.16	6.0E-80	AJ404468.1	NT	Homo sapiens mRNA for dynein heavy chain (DNAH9 gene)
6376	18980	31759	4.09	6.0E-80	11436736	NT	Homo sapiens tubby like protein 3 (TULP3), mRNA
6418	19021		0.88	6.0E-80	7662393	NT	Homo sapiens KIAA0941 protein (KIAA0941), mRNA



Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6464	18065	31850	0.84	6.0E-80	M18533.1	NT	Homo sapiens dystrophin (DMD) mRNA, complete cds
8758	21297	34217	2.43	6.0E-80	11528464	NT	Homo sapiens G protein-coupled receptor 51 (GPR51), mRNA
8758	21297	34218	2.43	6.0E-80	11528464	NT	Homo sapiens G protein-coupled receptor 51 (GPR51), mRNA
8949	21487	34409	1.6	6.0E-80	AL163301.2	NT	Homo sapiens chromosome 21 segment HS21C101
9281	21607	34759	0.88	6.0E-80	AF161495.1	NT	Homo sapiens HSPG146 mRNA, complete cds
9775	22273	35258	1.49	6.0E-80	U20211.1	NT	Human cone photoreceptor cGMP-phosphodiesterase alpha subunit gene, exon 21
10820	23341	36356	2.68	6.0E-80	11427366	NT	Homo sapiens brefeldin A-inhibited guanine nucleotide-exchange protein 1 (BIG1), mRNA
11103	23613	36853	22.81	6.0E-80	AF226730.1	NT	Homo sapiens Cyt19 mRNA, complete cds
11593	24036	37105	1.93	6.0E-80	AF102285.1	NT	Homo sapiens N-acetylglucosamine-phosphate mutase mRNA, complete cds
11817	24896		1.64	6.0E-80	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
12018	24316		5.01	6.0E-80	AB026900.1	NT	Homo sapiens GST gene for cerebroside sulfotransferase, exon 1, 2, 3, 4, 5
12543	25028		1.95	6.0E-80	AJ133127.1	NT	Homo sapiens mRNA for sodium-glucose cotransporter (SGLT2 gene)
614	13241	25716	2.83	5.0E-80	45062228	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, non-ATPase, 3 (PSMD3) mRNA
868	13483	25968	1.9	5.0E-80	AF108830.1	NT	Homo sapiens serine-threonine protein kinase (MNBH) mRNA, complete cds
868	13483	25969	1.9	5.0E-80	AF108830.1	NT	Homo sapiens serine-threonine protein kinase (MNBH) mRNA, complete cds
1231	13830		1.16	5.0E-80	X91847.1	NT	H. sapiens ncx1 gene (exon 12)
1503	14095		2.88	5.0E-80	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
2399	14967	27540	1.08	5.0E-80	U89358.1	NT	Human I(2)mbt protein homolog mRNA, complete cds
2474	15041	27609	2.56	5.0E-80	AB037855.1	NT	Homo sapiens mRNA for KIAA1434 protein, partial cds
2820	15372	27641	2.67	5.0E-80	4504292	NT	Homo sapiens H3 histone family, member J (H3FJ) mRNA
4112	16706	29160	0.93	5.0E-80	AB019038.1	NT	Homo sapiens HMT-1 mRNA for beta-1,4 mannosyltransferase, complete cds
4112	16706	29161	0.93	5.0E-80	AB019038.1	NT	Homo sapiens HMT-1 mRNA for beta-1,4 mannosyltransferase, complete cds
5089	17662	30102	1.29	5.0E-80	AL163288.2	NT	Homo sapiens chromosome 21 segment HS21C068
8268	20839	33760	1.04	5.0E-80	9910293	NT	Mus musculus keratin complex 2, gene 6g (Krt2-6g), mRNA
9182	21759	34705	15.52	4.0E-80	F25915.1	EST_HUMAN	HSPD13155 HM3 Homo sapiens cDNA clone s4000045F03
233	12893		11.18	3.0E-80	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
5034	17608		6.93	3.0E-80	BE817465.1	EST_HUMAN	QV4-BN0263-040600-241-g10 BN0263 Homo sapiens cDNA
5986	18606	31340	2.04	3.0E-80	A0191675.1	EST_HUMAN	cc23e12.x1 Soeres NSF_F8_gw_OT_PA_S1 Homo sapiens cDNA clone IMAGE:1567054 3' similar to
1833	14421	26971	6.34	2.0E-80	R5321.1	EST_HUMAN	TR:O35790 O35790 PIG-L
1900	14485	27046	1.4	2.0E-80	A1444821.1	EST_HUMAN	yg65a0.8.r1 Soeres infant brain tNIB Homo sapiens cDNA clone IMAGE:38060 5'
2100	14679	27247	5.6	2.0E-80	AL043116.2	EST_HUMAN	RET487 subtracted retina cDNA library Homo sapiens cDNA clone RET487
6393	18996	31775	0.71	2.0E-80	A1923972.1	EST_HUMAN	DKFZp434D1323_1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434D1323 5'
							wn49c.t0.x1 NCI_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2448796 3'

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6393	18996	31776	0.71	2.0E-80	A1923972.1	EST_HUMAN	wn49c10.x1 NCI CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2448786 3'
6897	19631	32469	1.06	2.0E-80	AA582952.1	EST_HUMAN	nm80d01.s1 NCI CGAP_Co8 Homo sapiens cDNA clone IMAGE:1080177 3'
6993	19491	32312	1.69	2.0E-80	11421930	NT	Homo sapiens Gdgl transport complex protein (80 kDa) (GTC80), mRNA
7298	19826	32685	1	2.0E-80	T75215.1	EST_HUMAN	yc86f12.r1 Soares Infant brain 1N1B Homo sapiens cDNA clone IMAGE:22851 5' similar to
9086	21622	34558	1.25	2.0E-80	AW964270.1	EST_HUMAN	SP-K1CR_XENLA P08802 KERATIN, TYPE I CYTOSKELETAL ENDO B :
9683	22182	35156	1.13	2.0E-80	AJ007379.1	NT	EST376343 MAGE resequences, MAGH Homo sapiens cDNA
10748	23272	36287	7.28	2.0E-80	AA393362.1	EST_HUMAN	Homo sapiens GGT gene, exon 6
362	13011		1.44	1.0E-80	AL163303.2	NT	z70f12.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:727727 5' similar to TR:G191315
832	13449	25956	1.39	1.0E-80	AF231920.1	NT	G191315 ANDROGEN-DEPENDENT EXPRESSED PROTEIN :
1997	14579		3.73	1.0E-80	A1732656.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C103
4945	17520	29982	0.71	1.0E-80	N99520.1	EST_HUMAN	Homo sapiens chromosome 21 unknown mRNA
5530	18162		6.77	1.0E-80	BE386615.1	EST_HUMAN	nm01f12.x5 NCI CGAP_Co8 Homo sapiens cDNA clone IMAGE:1076495 3' similar to contains OFR.11 OFR
6126	18741	31494	5.9	1.0E-80	L10347.1	NT	repetitive element :
6624	19221	32026	1.57	1.0E-80	5174540	NT	z39g07.r1 Soares fetal liver spleen 1N1FLS Homo sapiens cDNA clone IMAGE:294972 5' similar to contains
7258	19786	32642	1.39	1.0E-80	AJ224172.1	NT	Alu repetitive element
7574	20090	32866	2.64	1.0E-80	A1948731.1	EST_HUMAN	601274305F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3615433 5'
7574	20090	32867	2.64	1.0E-80	A1948731.1	EST_HUMAN	Human pro-alpha1 type II collagen (COL2A1) gene exons 1-54, complete cds
8173	20714	33630	1.25	1.0E-80	11421211	NT	Homo sapiens malate dehydrogenase 2, NAD (mitochondrial) (MDH2), nuclear gene encoding mitochondrial
8634	21173	34091	0.96	1.0E-80	11421211	NT	protein, mRNA
8634	21173	34092	0.96	1.0E-80	11421211	NT	Homo sapiens mRNA for lipophilin B
9209	21726	34698	1.79	1.0E-80	AF245219.1	NT	wq25c05.x1 NCI CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2472296 3'
9209	21726	34699	1.79	1.0E-80	AF245219.1	NT	wq25c05.x1 NCI CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2472296 3'
10323	22817	35813	0.93	1.0E-80	D63479.2	NT	Homo sapiens protein tyrosine phosphatase, receptor type, A (PTPRA), mRNA
10531	23068	36080	2.64	1.0E-80	11641276	NT	Homo sapiens protein tyrosine phosphatase, receptor type, A (PTPRA), mRNA
10531	23068	36081	2.64	1.0E-80	11641276	NT	Homo sapiens protein tyrosine phosphatase, receptor type, A (PTPRA), mRNA
12091	24359	30967	2.04	1.0E-80	11417901	NT	Homo sapiens probable mannose binding C-type lectin DC-SIGNR mRNA, complete cds
10564	23100	36113	3.56	8.0E-81	A1251752.1	EST_HUMAN	Homo sapiens probable mannose binding C-type lectin DC-SIGNR mRNA, complete cds
10564	23100	36114	3.56	8.0E-81	A1251752.1	EST_HUMAN	Homo sapiens mRNA for KIAA0145 protein, partial cds
11033	23547	36582	6.13	8.0E-81	BE394525.1	EST_HUMAN	Homo sapiens similar to rat myomegalin (LOC84182), mRNA
							Homo sapiens similar to rat myomegalin (LOC84182), mRNA
							Homo sapiens similar to rat myomegalin (LOC84182), mRNA
							Homo sapiens meningoangioma (disrupted in balanced translocation) 1 (MN1), mRNA
							qh90g05.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1854296 3'
							qh90g05.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1854296 3'
							601310531F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3632070 5'

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7299	19827	32686	3.19	7.0E-81	AI822115.1	EST_HUMAN	z891c08.x3 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:289918 3'
4476	17061	29510	4.95	6.0E-81	BE256829.1	EST_HUMAN	601111970F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3352840 5'
4476	17061	29511	4.95	6.0E-81	BE256829.1	EST_HUMAN	601111970F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3352840 5'
5487	18121	30528	1.71	6.0E-81	4501848	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABCA3), mRNA
5487	18121	30529	1.71	6.0E-81	4501848	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABCA3), mRNA
9162	21697	34641	1.22	6.0E-81	AA360017.1	EST_HUMAN	EST69129 Fetal lung II Homo sapiens cDNA 5' end
12240	24453	30955	2.16	6.0E-81	BF679022.1	EST_HUMAN	602153666F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4294601 5'
12240	24453	30956	2.16	6.0E-81	BF679022.1	EST_HUMAN	602153666F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4294601 5'
2258	14832	27410	2.68	5.0E-81	BE268042.1	EST_HUMAN	601125505F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3345480 5'
8351	20892	33813	1.42	5.0E-81	AB007923.1	NT	Homo sapiens mRNA for KIAA0454 protein, partial cds
8351	20892	33814	1.42	5.0E-81	AB007923.1	NT	Homo sapiens mRNA for KIAA0454 protein, partial cds
9566	22066	35025	1.28	5.0E-81	M60316.1	NT	Human transforming growth factor-beta (tgf-beta) mRNA, complete cds
9566	22066	35026	1.28	5.0E-81	M60316.1	NT	Human transforming growth factor-beta (tgf-beta) mRNA, complete cds
11455	23905	36972	2.68	5.0E-81	9506634	NT	Homo sapiens hypothetical protein (FLJ11045), mRNA
238	12898	25381	1.3	4.0E-81	AF252257.1	NT	Homo sapiens GRP2 binding protein mRNA, partial cds
731	13351	25846	1.34	4.0E-81	AI521435.1	EST_HUMAN	th60e12.x1 NCI_CGAP_Ov23 Homo sapiens cDNA clone IMAGE:2122702 3' similar to TR:Q85560 Q85560
3206	15816	28294	4.76	4.0E-81	AB037766.1	NT	Homo sapiens mRNA for KIAA1345 protein, partial cds
3690	16291	28760	0.98	4.0E-81	AW004608.1	EST_HUMAN	ws90h03.x1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:2505268 3' similar to TR:O43815 O43815
4240	16828	29277	2.39	4.0E-81	AF263308.1	NT	STRIATIN ;
4240	16828	29278	2.39	4.0E-81	AF263308.1	NT	Homo sapiens rab3 interacting protein variant 2 mRNA, partial cds
4481	17066	29516	1.08	4.0E-81	8923209	NT	Homo sapiens rab3 interacting protein variant 2 mRNA, partial cds
7321	19848	32708	0.86	4.0E-81	4757893	NT	Homo sapiens hypothetical protein FLJ20220 (FLJ20220), mRNA
8229	20770	33689	1.71	4.0E-81	X06989.1	NT	Homo sapiens calcium channel, voltage-dependent, L type, alpha 2/delta subunit (CACNA2), mRNA
8482	21021	33936	3.39	4.0E-81	U20197.1	NT	Human mRNA for amyloid A(751) protein
8482	21021	33937	3.39	4.0E-81	U20197.1	NT	Human cone photoreceptor cGMP-phosphodiesterase alpha' subunit geno, exons 2 and 3
9153	21688	34632	4.78	4.0E-81	AB018001.1	NT	Human cone photoreceptor cGMP-phosphodiesterase alpha' subunit geno, exons 2 and 3
10012	22507	35498	1.79	4.0E-81	11425281	NT	Homo sapiens mRNA for Death-associated protein kinase 2, complete cds
10075	22570	35564	0.57	4.0E-81	11439065	NT	Homo sapiens ligase I, DNA, ATP-dependent (LIG1), mRNA
10075	22570	35565	0.57	4.0E-81	11439065	NT	Homo sapiens acyl-Coenzyme A dehydrogenase family, member 8 (ACAD8), mRNA
11063	23575	36612	2.85	4.0E-81	4759085	NT	Homo sapiens acyl-Coenzyme A dehydrogenase family, member 8 (ACAD8), mRNA
11063	23575	36613	2.85	4.0E-81	4759085	NT	Homo sapiens vesicle trafficking protein sec22b (SEC22B) mRNA

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Table 4  
Single Exon/Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11708	24961	30634	11.8	4.0E-81	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
11708	24961	30635	11.8	4.0E-81	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
12277	24481	30938	2.13	4.0E-81	11417871	NT	Homo sapiens beta-ureidopropionase (LOC51733), mRNA
12277	24481	30939	2.13	4.0E-81	11417871	NT	Homo sapiens beta-ureidopropionase (LOC51733), mRNA
12430	24572	30912	4.2	4.0E-81	11417974	NT	Homo sapiens transcobalamin II; macrocytic anemia (TCN2), mRNA
1310	13904	26422	9.81	3.0E-81	Y18000.1	NT	Homo sapiens NF2 gene
1310	13904	26423	9.81	3.0E-81	Y18000.1	NT	Homo sapiens NF2 gene
2409	14977	27551	1.66	3.0E-81	AF077188.1	NT	Homo sapiens cullin 4A (CUL4A) mRNA, complete cds
3020	15636	28112	5.8	3.0E-81	4506280	NT	Homo sapiens pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1) (PTN) mRNA
3020	15636	28113	5.8	3.0E-81	4506280	NT	Homo sapiens pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1) (PTN) mRNA
5143	17714	27953	2.95	3.0E-81	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
2859	15478	27953	2.07	2.0E-81	BE784636.1	EST_HUMAN	601474072F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3877121 5'
2859	15478	27954	2.07	2.0E-81	BE784636.1	EST_HUMAN	601474072F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3877121 5'
3841	18440	28902	0.75	2.0E-81	AW611542.1	EST_HUMAN	hg85c01.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2952384 3'
12591	18440	28902	2.77	2.0E-81	AW611542.1	EST_HUMAN	hg85c01.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2952384 3'
1468	14060	26595	0.92	1.0E-81	W26539.1	EST_HUMAN	33f3 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
4613	17196	29842	1.81	1.0E-81	AA040370.1	EST_HUMAN	zk45h09.r1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:485825 5' similar to
4750	17331	29774	8.65	1.0E-81	BE047966.1	EST_HUMAN	PIR:S52437 S52437 CDP-diacylglycerol synthase - fruit fly
5049	17822	30067	1.14	1.0E-81	AW182429.1	EST_HUMAN	tz45c04.y1 NCI_CGAP_Brn52 Homo sapiens cDNA clone IMAGE:2291526 5'
5446	18017	37139	3.85	1.0E-81	U87928.1	NT	x42a03.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2659852 3'
5556	18188	30603	3.58	1.0E-81	11432966	NT	Human acetylcholinesterase (ACO2) gene, exon 3
5556	18188	30604	3.58	1.0E-81	11432966	NT	Homo sapiens polymerase (DNA directed), gamma (POLG), mRNA
5963	18319	30818	0.77	1.0E-81	AA255569.1	EST_HUMAN	Homo sapiens polymerase (DNA directed), gamma (POLG), mRNA
5835	18459	31180	3.92	1.0E-81	U52351.1	NT	z85d08.r1 Soares_NbHMPu_S1 Homo sapiens cDNA clone IMAGE:682475 5' similar to SW:PRI2_HUMAN
5835	18459	31181	3.92	1.0E-81	U52351.1	NT	P49643 DNA PRIMASE 58 KD SUBUNIT
6295	18903	31674	1.82	1.0E-81	BF674641.1	EST_HUMAN	Homo sapiens arm-repeat protein NPRAP/neurjungin (CTNND2) mRNA, partial cds
							Homo sapiens arm-repeat protein NPRAP/neurjungin (CTNND2) mRNA, partial cds
							602137804F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4274535 5'
							Homo sapiens caveolin-1/2 locus, Contig1, D7S522, genes CAV2 (exons 1, 2a, and 2b), CAV1 (exons 1 and 2)
6836	19426	32242	0.73	1.0E-81	AJ133299.1	NT	
7748	20256	33151	7.93	1.0E-81	11432966	NT	Homo sapiens polymerase (DNA directed), gamma (POLG), mRNA
7762	20270	33168	0.72	1.0E-81	AJ250408.1	NT	Homo sapiens GLI3 gene for GLI3 protein

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9691	22190	35163	13.75	1.0E-81	BE958278.1	EST_HUMAN	601645051F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:3830228 5'
9691	22190	35164	13.75	1.0E-81	BE958278.1	EST_HUMAN	601645051F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:3830228 5'
9879	22376	35353	4.13	1.0E-81	BE564367.1	EST_HUMAN	601343180F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3685483 5'
							sc14d06.s1 Stratagene HeLa cell s3 937216 Homo sapiens cDNA clone IMAGE:858427 3' similar to SW:YB36_YEAST P38126 HYPOTHETICAL 60.5 KD PROTEIN IN RPS101-RPS13 INTERGENIC REGION.
10014	22509	35500	1.16	1.0E-81	AA630784.1	EST_HUMAN	601577339F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3838280 5'
10016	22511	35502	2.64	1.0E-81	BE744545.1	EST_HUMAN	601577339F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3838280 5'
10016	22511	35503	2.64	1.0E-81	BE744545.1	EST_HUMAN	601577339F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3838280 5'
10402	22896	35892	1.47	1.0E-81	AW897550.1	EST_HUMAN	CM3-NN0059-140400-147-a12 NN0059 Homo sapiens cDNA
10967	23482	36508	2.02	1.0E-81	AW844986.1	EST_HUMAN	MR0-CT0008-250599-019 CT0008 Homo sapiens cDNA
10967	23482	36509	2.02	1.0E-81	AW844986.1	EST_HUMAN	MR0-CT0008-250599-019 CT0008 Homo sapiens cDNA
10971	23486	36514	1.57	1.0E-81	AW798167.1	EST_HUMAN	RC3-UM0046-280200-011-a08 UM0046 Homo sapiens cDNA
10971	23486	36515	1.57	1.0E-81	AW798167.1	EST_HUMAN	RC3-UM0046-280200-011-a08 UM0046 Homo sapiens cDNA
11152	18027	30489	2.07	1.0E-81	AW960658.1	EST_HUMAN	EST372729 MAGF resequences, MAGF Homo sapiens cDNA
11398	23850	36916	2.34	1.0E-81	BF204253.1	EST_HUMAN	601867714F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4110459 5'
11820	24256	31012	3.39	1.0E-81	11418138	NT	Homo sapiens phorbol (similar to apolipoprotein B mRNA editing protein) (DJ742C19.2), mRNA
14	12693	25149	13.13	8.0E-82	AF161406.1	NT	Homo sapiens HSPC288 mRNA, partial cds
111	12683	25149	6.9	8.0E-82	AF161406.1	NT	Homo sapiens HSPC288 mRNA, partial cds
285	12841	25427	1.99	8.0E-82	U06988.1	NT	Human CRFB4 gene, partial cds
847	13463	25971	2.2	8.0E-82	U06988.1	NT	Human CRFB4 gene, partial cds
920	13533	26051	1.5	8.0E-82	U06988.1	NT	Human CRFB4 gene, partial cds
1537	14129	26665	1.12	8.0E-82	AB037748.1	NT	Homo sapiens mRNA for KIAA1327 protein, partial cds
							Homo sapiens glutathione peroxidase 5 (epididymal androgen-related protein) (GPX5), transcript variant 2, mRNA
1697	14280	26926	1.42	8.0E-82	6715601	NT	mRNA
4328	16914	28358	0.77	8.0E-82	8923432	NT	Homo sapiens hypothetical protein FLJ20461 (FLJ20461), mRNA
1489	14091		1.45	7.0E-82	BF035327.1	EST_HUMAN	601458531F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3862088 5'
2784	15347	27916	1.21	7.0E-82	AU144050.1	EST_HUMAN	AU144050 HEMBA1 Homo sapiens cDNA clone HEMBA1000752 3'
12395	24555		1.37	7.0E-82	AA515512.1	EST_HUMAN	nt69e11.s1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:925198 3'
1710	14303	26940	20.15	4.0E-82	AF081494.1	NT	Homo sapiens alpha-tubulin isoform 1 mRNA, complete cds
5688	18314	30812	0.83	4.0E-82	BF351691.1	EST_HUMAN	QV2-HT0540-120900-362-f08 HT0540 Homo sapiens cDNA
5688	18314	30813	0.83	4.0E-82	BF351691.1	EST_HUMAN	QV2-HT0540-120900-362-f08 HT0540 Homo sapiens cDNA
							wp75609.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2467624 3' similar to TR:O75278 O75276 PKD1
11563	24010	37080	5.53	4.0E-82	AI937300.1	EST_HUMAN	Homo sapiens presenilin-1 gene, exons 1 and 2
12179	24415		5.98	4.0E-82	AF028701.2	NT	

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
299	12955	25444	14.77	3.0E-82	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
732	13352	25947	2.11	3.0E-82	BE005705.1	EST_HUMAN	RC2-BN0120-010400-013-002 BN0120 Homo sapiens cDNA
820	13437	25944	8.87	3.0E-82	5174702	NT	Homo sapiens transforming growth factor beta-activated kinase-binding protein 1 (TAB1), mRNA
903	13517	26035	3.37	3.0E-82	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
1099	13704		39.06	3.0E-82	AA725948.1	EST_HUMAN	ai23905.s1 Soares testis_NHT Homo sapiens cDNA clone 1343648 3'
1399	13993	26522	1.11	3.0E-82	AW875073.1	EST_HUMAN	RC6-PT0001-190100-021-B02 PT0001 Homo sapiens cDNA
1515	14107	26643	2.15	3.0E-82	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
1945	14529	27085	1.59	3.0E-82	BE813232.1	EST_HUMAN	RC1-BN0005-260700-018-g04 BN0005 Homo sapiens cDNA
2050	14631	27202	1.18	3.0E-82	4501922	NT	Homo sapiens adenylate cyclase activating polypeptide 1 (pituitary) receptor type I (ADCYAP1R1) mRNA
3310	15921		2.54	3.0E-82	5453811	NT	Homo sapiens neurotrophic tyrosine kinase, receptor, type 2 (NTRK2) mRNA
5047	17620	30065	0.92	3.0E-82	AA135079.1	EST_HUMAN	zn93b04.r1 Stratagene lung carcinoma 837218 Homo sapiens cDNA clone IMAGE:585711 5' similar to SW_PAGT_BOVIN_Q07537 POLYPEPTIDE N-ACETYL GALACTOSAMINYLTRANSFERASE ;
8093	20634	33546	2.5	3.0E-82	11425206	NT	Homo sapiens ankryrin-like with transmembrane domains 1 (ANKTM1), mRNA
8491	21030	33949	0.82	3.0E-82	11432889	NT	Homo sapiens contactin 6 (CNTN6), mRNA
8491	21030	33950	0.82	3.0E-82	11432889	NT	Homo sapiens contactin 6 (CNTN6), mRNA
9738	22236	35215	5.16	3.0E-82	AB028000.1	NT	Homo sapiens mRNA for KIAA1077 protein, partial cds
9738	22236	35216	5.16	3.0E-82	AB028000.1	NT	Homo sapiens mRNA for KIAA1077 protein, partial cds
623	13250	25723	2.46	2.0E-82	AB023216.1	NT	Homo sapiens mRNA for KIAA0999 protein, partial cds
623	13250	25724	2.46	2.0E-82	AB023216.1	NT	Homo sapiens mRNA for KIAA0999 protein, partial cds
1724	14315	26857	1.52	2.0E-82	AL046390.1	EST_HUMAN	DKFZp434M117_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434M117 5'
3637	16436	28898	1.47	2.0E-82	M86879.1	NT	H sapiens plasminogen-apolipoprotein (a) gene family, exon for 1st kringle 4 repeat
3913	16511	28973	1.03	2.0E-82	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
4095	16690	28146	0.62	2.0E-82	U76833.1	NT	Human integral membrane serine protease Seprase mRNA, complete cds
4317	16903	28347	0.66	2.0E-82	4504116	NT	Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1) mRNA
4656	17238	29693	1.38	2.0E-82	AB028019.1	NT	Homo sapiens mRNA for KIAA1096 protein, partial cds
4656	17238	29694	1.38	2.0E-82	AB028019.1	NT	Homo sapiens mRNA for KIAA1096 protein, partial cds
4995	17569	30013	2.59	2.0E-82	AF045555.1	NT	Homo sapiens wbscr1 (WBSR1) and wbscr5 (WBSR5) genes, complete cds, alternatively spliced and replication factor C subunit 2 (RFC2) gene, complete cds
5239	17803	30223	1.36	2.0E-82	4507580	NT	Homo sapiens tumor necrosis factor receptor superfamily, member 5 (TNFRSF5) mRNA
5239	17803	30224	1.36	2.0E-82	4507580	NT	Homo sapiens tumor necrosis factor receptor superfamily, member 5 (TNFRSF5) mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5320	17882	30301	1.3	2.0E-82	4502508	NT	Homo sapiens complement component 5 (C5) mRNA
5662	18289	30787	3.76	2.0E-82	AB018270.1	NT	Homo sapiens mRNA for KIAA0727 protein, partial cds
6322	18929	31705	4.77	2.0E-82	AF234882.1	NT	Homo sapiens FAM4A1 splice variant a (FAM4A1) mRNA, complete cds
7673	25121		1.02	2.0E-82	A1478428.1	EST_HUMAN	trn21g05.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2157272 3'
7771	20280	33177	0.71	2.0E-82	8923130	NT	Homo sapiens hypothetical protein FLJ20128 (FLJ20128), mRNA
8247	20788	33707	1.82	2.0E-82	11321570	NT	Homo sapiens slit (Drosophila) homolog 3 (SLIT3), mRNA
10018	22513	35505	1.45	2.0E-82	Y08032.1	NT	Human endogenous retrovirus-K, LTR U5 and gag gene
10018	22513	35508	1.45	2.0E-82	Y08032.1	NT	Human endogenous retrovirus-K, LTR U5 and gag gene
11149	23657	36899	1.95	2.0E-82	1147191	NT	Homo sapiens leucylcystinyl aminopeptidase (LNPEP), mRNA
11149	23657	36700	1.95	2.0E-82	1147191	NT	Homo sapiens leucylcystinyl aminopeptidase (LNPEP), mRNA
11155	23662	36707	2.35	2.0E-82	1147105	NT	Homo sapiens 3-hydroxy-3-methylglutaryl-Coenzyme A reductase (HMGCR), mRNA
11188	23693	36741	8.98	2.0E-82	U80736.1	NT	Homo sapiens CAGF9 mRNA, partial cds
11188	23693	36742	8.98	2.0E-82	U80736.1	NT	Homo sapiens CAGF9 mRNA, partial cds
11737	24140		4.92	2.0E-82	N94950.1	EST_HUMAN	z31d10.s1 Soares_parathyroid_tumor_NHHPA Homo sapiens cDNA clone IMAGE:305203 3'
12269	24406		2.45	2.0E-82	AA011278.1	EST_HUMAN	z01g09.r1 Soares_fetal_liver脾脏_INFLS_S1 Homo sapiens cDNA clone IMAGE:429568 5'
618	13245	25718	1.59	1.0E-82	11545921	NT	Homo sapiens melanoma differentiation associated protein-5 (MDA5), mRNA
1250	13847		1.25	1.0E-82	BE885108.1	EST_HUMAN	601510850F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3912207 5'
1329	13923	26443	2.7	1.0E-82	BE064386.1	EST_HUMAN	RC4-BT0310-110300-015-f10 BT0310 Homo sapiens cDNA
1330	13924	26444	0.84	1.0E-82	AB011110.2	NT	Homo sapiens mRNA for KIAA0538 protein, partial cds
8672	21411	34334	1.31	1.0E-82	AB037838.1	NT	Homo sapiens mRNA for KIAA1417 protein, partial cds
9571	22071	35032	0.48	1.0E-82	AB014562.1	NT	Homo sapiens mRNA for KIAA0862 protein, partial cds
10143	22638		1.19	1.0E-82	BF515938.1	EST_HUMAN	U-H-BW1-soa-f03-0-U1.s1 NCL_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3084053 3'
10824	23156	36169	2.41	1.0E-82	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
10887	23408	36425	1.55	1.0E-82	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C048
8649	21188	34106	4.39	9.0E-83	BF072220.1	EST_HUMAN	602150403F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4291561 5'
10175	22670	35664	0.78	9.0E-83	BE253347.1	EST_HUMAN	601117160F1 NIH_MGC_18 Homo sapiens cDNA clone IMAGE:3357734 6'
1459	14051	26583	4.53	8.0E-83	BE383973.1	EST_HUMAN	601273346F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3614362 5'
1721	15384	26852	2.5	8.0E-83	N66951.1	EST_HUMAN	za48f12.s1 Soares_fetal_liver脾脏_INFLS Homo sapiens cDNA clone IMAGE:295823 3'
1401	13995	26523	1	7.0E-83	AW385529.1	EST_HUMAN	QV4-LT0018-271289-068-h11 LT0018 Homo sapiens cDNA
2680	15507		1.75	7.0E-83	AA584655.1	EST_HUMAN	no12h01.s1 NCL_CGAP_Phet Homo sapiens cDNA clone IMAGE:1100497 3' similar to contains Alu repetitive element
4940	17515		6.94	7.0E-83	BF221813.1	EST_HUMAN	7p37e07.x1 NCL_CGAP_P128 Homo sapiens cDNA clone IMAGE:3647893 3' similar to TR:Q8Y318 Q8Y316 DJ207H1.1
6202	18812	31562	0.69	7.0E-83	11426657	NT	Homo sapiens KIAA0100 gene product (KIAA0100), mRNA

Table 4

### Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
428	13081	25555	3.97	6.0E-83	M33320.1	NT	Human platelet Glycoprotein IIb (GPIIb) gene, exons 2-29
1822	14411	26956	2.07	6.0E-83	AW573088.1	EST_HUMAN	tf31h03.x1 Soares_NFL_I_GBC_S1 Homo sapiens cDNA clone IMAGE:2933525 3' similar to SW:YBEB_HAEIN P44471 HYPOTHETICAL PROTEIN H10034. ;
3087	15702		0.81	6.0E-83	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
3619	16222	28700	1.18	6.0E-83	11430241	NT	Homo sapiens hypothetical protein FLJ10379 (FLJ10379), mRNA
5497	18131	30539	2.35	6.0E-83	4507866	NT	Homo sapiens VAMP (vesicle-associated membrane protein)-associated protein A (33kD) (VAPA) mRNA, and translated products
6174	18785	31553	1.18	6.0E-83	AJ010770.1	NT	Homo sapiens hyperin gene, exons 1-50
7513	20034	32900	1.96	6.0E-83	11422024	NT	Homo sapiens met proto-oncogene (hepatocyte growth factor receptor) (MET), mRNA
9594	22094	35058	3.97	6.0E-83	4505314	NT	Homo sapiens myomesin (M-protein) 2 (165kD) (MYOM2), mRNA
9884	22183	35157	2.77	6.0E-83	11430647	NT	Homo sapiens pre-mRNA splicing factor similar to S. cerevisiae Pp18 (PRP18), mRNA
9884	22183	35158	2.77	6.0E-83	11430647	NT	Homo sapiens pre-mRNA splicing factor similar to S. cerevisiae Pp18 (PRP18), mRNA
11405	23856		6.84	6.0E-83	AA486105.1	EST_HUMAN	ab14er10.s1 Stratiene lung (#837210) Homo sapiens cDNA clone IMAGE:840810 3' similar to contains THR.12 THR repetitive element ;
11885	24102		5.52	6.0E-83	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
982	13594		10.4	5.0E-83	U17883.1	NT	Human succinate dehydrogenase iron-protein subunit (sdhB) gene, exon 5
2094	15397		1.12	5.0E-83	AF068305.1	NT	Homo sapiens 26S proteasome regulatory subunit (SUG2) mRNA, complete cds
3700	16301	28769	0.98	5.0E-83	AL133207.2	NT	Novel human gene mapping to chromosome X
3977	16575	29045	0.84	5.0E-83	4985190	NT	Homo sapiens deoxyribonuclease 1 (DNASE1), mRNA
4527	17111	29555	0.6	5.0E-83	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
5238	17802	30221	13.17	5.0E-83	4557013	NT	Homo sapiens catalase (CAT) mRNA
5238	17802	30222	13.17	5.0E-83	4557013	NT	Homo sapiens catalase (CAT) mRNA
668	13292	25773	1.34	4.0E-83	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
3564	16168	28650	1.07	4.0E-83	BE888078.1	EST_HUMAN	601511580F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913195 5'
1035	13645		3.47	3.0E-83	AA368311.1	EST_HUMAN	EST79542 Placenta I Homo sapiens cDNA similar to similar to endogenous retrovirus ERV9
6892	19288		0.68	3.0E-83	A1217223.1	EST_HUMAN	q73e06.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1755682 3'
							ct64g05.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1621592 3' similar to TR:Q92614
1835	14423	26973	1.31	2.0E-83	AA983492.1	EST_HUMAN	Q92614 MYELOBLAST KIAA0216. ;
							ct64g05.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1621592 3' similar to TR:Q92614
1835	14423	26974	1.31	2.0E-83	AA983492.1	EST_HUMAN	Q92614 MYELOBLAST KIAA0216. ;
1969	14553	27109	2.88	2.0E-83	N66951.1	EST_HUMAN	zz48f12.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:295823 3'
2876	15494	27964	1.06	2.0E-83	RF828694.1	EST_HUMAN	RC6-ET70046-280600-013-H12 ET70046 Homo sapiens cDNA



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3307	15918		2.53	2.0E-83	11430834	NT	Homo sapiens sat (Drosophila)-like 1 (SALL1), mRNA
3842	16441		0.78	2.0E-83	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
4428	17015	29457	4.01	2.0E-83	AF202879.1	NT	Homo sapiens hematopoietic progenitor cell antigen CD34 precursor (CD34) mRNA, partial cds
4766	17337	29781	4.54	2.0E-83	7703398	NT	Homo sapiens ankyrin repeat-containing protein ASB-2 (LOC51876), mRNA
4756	17337	29782	4.54	2.0E-83	7703398	NT	Homo sapiens ankyrin repeat-containing protein ASB-2 (LOC51876), mRNA
5475	18109	30518	0.8	2.0E-83	U06879.1	NT	Human carcinoembryonic antigen gene family member 18 (CGM18) gene, exons A1 and B1
6119	18735	31488	1.28	2.0E-83	BE885401.1	EST_HUMAN	601507482F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3909088 5'
7462	19985	32850	6.08	2.0E-83	AF129533.1	NT	Homo sapiens F-box protein Fb3b (FBL3B) mRNA, partial cds
7784	20327	33232	0.53	2.0E-83	AB001025.1	NT	Homo sapiens mRNA for brain ryanodine receptor, complete cds
7784	20327	33233	0.53	2.0E-83	AB001025.1	NT	Homo sapiens mRNA for brain ryanodine receptor, complete cds
7928	20470	33379	1.54	2.0E-83	U66707.1	NT	Rattus norvegicus densin-180 mRNA, complete cds
8256	20797	33714	2.17	2.0E-83	AF011920.1	NT	Homo sapiens protein kinase CK2 catalytic subunit alpha gene, exon 1
8256	20797	33715	2.17	2.0E-83	AF011920.1	NT	Homo sapiens protein kinase CK2 catalytic subunit alpha gene, exon 1
9787	22295	35278	0.65	2.0E-83	BF128748.1	EST_HUMAN	601811127F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4053894 5'
9947	22442	35419	2.41	2.0E-83	M22094.1	NT	Human neural cell adhesion molecule (N-CAM) secreted isoform mRNA, 3' end
9947	22442	35420	2.41	2.0E-83	M22094.1	NT	Human neural cell adhesion molecule (N-CAM) secreted isoform mRNA, 3' end
10025	22520	35516	1.12	2.0E-83	AU117659.1	EST_HUMAN	AU117659 HEMBA1 Homo sapiens cDNA clone HEMBA1001910 5'
10092	22587	35580	0.78	2.0E-83	AW505600.1	EST_HUMAN	UI-HF-BNO-amd-H-07-0-UI.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3081852 5'
10729	23255	36271	4.96	2.0E-83	11436448	NT	Homo sapiens KIAA0985 protein (KIAA0985), mRNA
10806	23329	36340	1.95	2.0E-83	AL134452.1	EST_HUMAN	DKFZp547J135_r1 547 (synonym: hibr1) Homo sapiens cDNA clone DKFZp547J135 5'
10806	23329	36341	1.95	2.0E-83	AL134452.1	EST_HUMAN	DKFZp547J135_r1 547 (synonym: hibr1) Homo sapiens cDNA clone DKFZp547J135 5'
12342	24523		4.52	2.0E-83	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
1457	14049	26580	2.83	1.0E-83	4504326	NT	Homo sapiens hydroxycarboxyl-Coenzyme A dehydrogenase/3-ketocacyl-Coenzyme A thiolase/enoyl-Coenzyme A hydratase (trifunctional protein), beta subunit (HADHB) mRNA
1457	14049	26581	2.83	1.0E-83	4504326	NT	Homo sapiens hydroxycarboxyl-Coenzyme A dehydrogenase/3-ketocacyl-Coenzyme A thiolase/enoyl-Coenzyme A hydratase (trifunctional protein), beta subunit (HADHB) mRNA
1506	14098	26635	15.46	1.0E-83	AF105087.1	NT	Homo sapiens lipopolysaccharide-binding protein (LBP) mRNA, complete cds
1506	14098	26636	15.46	1.0E-83	AF105087.1	NT	Homo sapiens lipopolysaccharide-binding protein (LBP) mRNA, complete cds
2084	14644	27218	1.11	1.0E-83	4503652	NT	Homo sapiens fatty-acid-Coenzyme A ligase, very long-chain 1 (FACVL1) mRNA
2681	15239	27807	1.06	1.0E-83	BE883890.1	EST_HUMAN	601507375F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3908754 5'
3217	15829	28308	0.69	1.0E-83	7662349	NT	Homo sapiens cell recognition molecule Caspr2 (KIAA0868), mRNA
3836	16534	29000	5.6	1.0E-83	AF053768.1	NT	Rattus norvegicus brain specific cortactin-binding protein CBP80 mRNA, partial cds
4326	16915	29359	2.45	1.0E-83	Z25822.1	NT	H. sapiens gene for mitochondrial dodecenoyl-CoA delta-isomerase, exon 3

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6797	19388	32204	1.58	1.0E-83	AI027614.1	EST_HUMAN	ov98b08.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1645431 3' similar to gb:M64241 QM PROTEIN (HUMAN);
3864	16462	28926	3.57	7.0E-84	BE901209.1	EST_HUMAN	601676023F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3958853 5'
1338	13932	26451	3.5	6.0E-84	BE838864.1	EST_HUMAN	RC2-FN0119-200600-011-g05 FN0119 Homo sapiens cDNA
1338	13932	26452	3.5	6.0E-84	BE838864.1	EST_HUMAN	RC2-FN0119-200600-011-g05 FN0119 Homo sapiens cDNA
2441	15008	27580	21.62	6.0E-84	AA776574.1	EST_HUMAN	ae86a03.s1 Striatagene schizo brain S11 Homo sapiens cDNA IMAGE:971020 3'
5449	18019		2.84	6.0E-84	AL042863.2	EST_HUMAN	DKFZp434H0322_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434H0322 5'
5709	18335	30840	1.74	6.0E-84	AA897339.1	EST_HUMAN	al47d03.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1460500 3' similar to gb:M14338 VITAMIN K-DEPENDENT PROTEIN S PRECURSOR (HUMAN);
5841	18465	31189	1.06	6.0E-84		NT	Homo sapiens acetyl LDL receptor; SREC=scavenger receptor expressed by endothelial cells (SREC), mRNA
5841	18465	31190	1.06	6.0E-84		NT	Homo sapiens acetyl LDL receptor; SREC=scavenger receptor expressed by endothelial cells (SREC), mRNA
7489	20012	32878	3.2	6.0E-84	BE810371.1	EST_HUMAN	PMO-LT0019-190600-004-F02 LT0019 Homo sapiens cDNA
7879	20190	33079	0.93	6.0E-84	AF038391.1	NT	Homo sapiens pre-mRNA splicing factor (PRP16) mRNA, complete cds
8018	20560	33461	1.85	6.0E-84	BE770199.1	EST_HUMAN	PM4-FT0054-160600-004-g10 FT0054 Homo sapiens cDNA
11409	23860		2	6.0E-84	AW369812.1	EST_HUMAN	IL0-BT0168-091199-139-e06 BT0168 Homo sapiens cDNA
743	13363	25858	0.69	5.0E-84	AA382811.1	EST_HUMAN	EST96094 Testis I Homo sapiens cDNA 5' end
3048	15864		1.4	5.0E-84	AF109718.1	NT	Homo sapiens chromosome 3 subtelomeric region
11419	23870	36931	2.7	5.0E-84	11428740	NT	Homo sapiens regulatory factor X_3 (influences HLA class II expression) (REF3), mRNA
11506	23955	37024	1.95	5.0E-84	AB032957.1	NT	Homo sapiens mRNA for KIAA1131 protein, partial cds
11506	23955	37025	1.95	5.0E-84	AB032957.1	NT	Homo sapiens mRNA for KIAA1131 protein, partial cds
1456	14048	26579	2.3	4.0E-84	AI885321.1	EST_HUMAN	wa76c04.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2302086 3' similar to SW:NRDC_HUMAN_Q43847 NARDILYSIN PRECURSOR ;
5085	17658	30099	0.79	4.0E-84	4505928	NT	Homo sapiens polynucleotide (DNA-directed), alpha (70kD) (POLA2), mRNA
5086	17659	30100	1.62	4.0E-84	AF069601.2	NT	Homo sapiens myosin light chain kinase isoform 2 (MLCK) mRNA, complete cds
5751	18377	31087	1.42	4.0E-84	11386168	NT	Homo sapiens protein tyrosine phosphatase, receptor type, G (PTPRG), mRNA
5751	18377	31088	1.42	4.0E-84	11386168	NT	Homo sapiens protein tyrosine phosphatase, receptor type, G (PTPRG), mRNA
6414	19017	31800	2.16	4.0E-84	AF059650.1	NT	Homo sapiens histone deacetylase 3 (HDAC3) gene, complete cds
7643	20155	33041	13.58	4.0E-84	11421326	NT	Homo sapiens KIAA0783 gene product (KIAA0783), mRNA
8842	21381	34305	1.06	4.0E-84	4557526	NT	Homo sapiens discs, large (Drosophila) homolog 2 (chapsyn-110) (DLG2) mRNA
8842	21381	34306	1.06	4.0E-84	4557526	NT	Homo sapiens discs, large (Drosophila) homolog 2 (chapsyn-110) (DLG2) mRNA
10798	23321	36331	5.76	4.0E-84	AB032956.1	NT	Homo sapiens mRNA for KIAA1130 protein, partial cds
338	12990	25477	1.97	3.0E-84	AF026200.1	NT	Homo sapiens Bach1 protein homolog mRNA, partial cds

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1194	13795	26304	0.86	3.0E-84	4758081	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (versican) (CSPG2) mRNA
2003	14585	27144	1.93	3.0E-84	5453855	NT	Homo sapiens pericentriolar material 1 (PCM1) mRNA
2051	14632	27203	1.94	3.0E-84	AL098880.1	NT	Novel human mRNA containing Zinc finger C2H2 type domains
3812	16411	28876	5.94	3.0E-84	AF014459.1	NT	Homo sapiens X-linked juvenile retinoschisis precursor protein (XLRS1) mRNA, complete cds
10758	23282		10.76	3.0E-84	AI983801.1	EST_HUMAN	wu20d03.x1 Soares_Dieckgraebe_colon_NHCD Homo sapiens cDNA clone IMAGE:2520585 3' similar to
2153	14730	27304	6.66	2.0E-84	BE695397.1	EST_HUMAN	gb:L05093 60S RIBOSOMAL PROTEIN L18A (HUMAN);
2153	14730	27305	6.66	2.0E-84	BE695397.1	EST_HUMAN	CM1-BT0795-190800-272-b08 BT0795 Homo sapiens cDNA
2970	15586	28068	11.6	2.0E-84	AF036694.1	NT	CM1-BT0795-190800-272-b08 BT0795 Homo sapiens cDNA
2989	15605	28085	1.3	2.0E-84	X69211.1	NT	Homo sapiens myelin transcription factor 1-like (MYT1-L) mRNA, complete cds
5717	18343	30849	1.02	2.0E-84	BF511575.1	EST_HUMAN	H. sapiens DNA for endogenous retroviral like element
5717	18343	30850	1.02	2.0E-84	BF511575.1	EST_HUMAN	UI-H-B14-act-a-02-Q-J1.s1 NCL_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3084963 3'
8748	18341	32148	1.04	2.0E-84	H63370.1	EST_HUMAN	UI-H-B14-act-a-02-Q-J1.s1 NCL_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3084963 3'
8001	20543		1.51	2.0E-84	AI298674.1	EST_HUMAN	yf56e11.s1 Soares fetal liver spleen INFLS Homo sapiens cDNA clone IMAGE:209324 3'
9269	21785	34744	0.89	2.0E-84	AU120280.1	EST_HUMAN	qm87c09.x1 NCL_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1895728 3'
							AU120280 HEMBB1 Homo sapiens cDNA clone HEMBB1000339 5'
9647	22146	35117	0.55	2.0E-84	H22841.1	EST_HUMAN	ym49e11.r1 Soares infant brain INIB Homo sapiens cDNA clone IMAGE:51383 5' similar to SP:APOH_RAT
11954	24279	31021	1.69	2.0E-84	BF448000.1	EST_HUMAN	P26844 BETA-2-GLYCOPROTEIN1;
11954	24279	31022	1.69	2.0E-84	BF448000.1	EST_HUMAN	nae30a02.x1 Lupski_sympathetic_trunk Homo sapiens cDNA clone IMAGE:4090251 3' similar to
334	12686	25473	1.61	1.0E-84	AF114488.1	NT	nae30a02.x1 Lupski_sympathetic_trunk Homo sapiens cDNA clone IMAGE:4090251 3' similar to
							TR:Q9UGS3 Q9UGS3 DJ756G23.1;
							Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
575	13205	25685	7.74	1.0E-84	4507952	NT	Homo sapiens tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide (YWHAZ) mRNA
749	13369		4	1.0E-84	11427631	NT	Homo sapiens complement component 5 (C5), mRNA
1336	13930	26449	3.89	1.0E-84	AA984378.1	EST_HUMAN	am85b11.s1 Stralagene schizo brain S11 Homo sapiens cDNA clone IMAGE:1626885 3'
2099	14678	27246	2.49	1.0E-84	BE392137.1	EST_HUMAN	601308006F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3826257 5'
2285	14839	27415	1.21	1.0E-84	11427197	NT	Homo sapiens pericentriolar material 1 (PCM1), mRNA
2945	15561	28035	1.09	1.0E-84	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
2945	15561	28036	1.09	1.0E-84	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
3814	16414	28878	2.92	1.0E-84	AA720851.1	EST_HUMAN	nm12e06.s1 NCL_CGAP_SS1 Homo sapiens cDNA clone IMAGE:1239108 3'
4508	17092	29539	6.06	1.0E-84	AJ229041.1	NT	Homo sapiens 959 kb contig between AML1 and CBRT on chromosome 21q22, segment 1/3
4809	17387	29837	3.09	1.0E-84	AL043314.2	EST_HUMAN	DKFZp434N0323_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434N0323 5'
4809	17387	29838	3.09	1.0E-84	AL043314.2	EST_HUMAN	DKFZp434N0323_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434N0323 5'

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5037	17092	29539	3.8	1.0E-84	AJ229041.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22; segment 1/3
6079	18696	31443	0.81	1.0E-84	11434422	NT	Homo sapiens speckle-type POZ protein (SPOP), mRNA uterine water channel=28 kDa erythrocyte integral membrane protein homolog [human, uterus, mRNA, 1340 nt]
6337	18943	31722	1.46	1.0E-84	S73492.1	NT	Novel human gene mapping to chromosome 13
6961	19538	32361	1.63	1.0E-84	AL049784.1	NT	Novel human gene mapping to chromosome 13
6961	19538	32362	1.63	1.0E-84	AL049784.1	NT	Novel human gene mapping to chromosome 13
7162	18694	32540	2.39	1.0E-84	AL049784.1	NT	Novel human gene mapping to chromosome 13
7486	20009	32875	3.27	1.0E-84	8393994	NT	Homo sapiens polymerase (DNA directed), alpha (POLA), mRNA
7565	20092	32958	1.18	1.0E-84	11430846	NT	Homo sapiens NGFI-A binding protein 1 (ERG1 binding protein 1) (NAB1), mRNA
7598	20082	32958	2.45	1.0E-84	11430846	NT	Homo sapiens NGFI-A binding protein 1 (ERG1 binding protein 1) (NAB1), mRNA
9454	21980		4.5	1.0E-84	5031984	NT	Homo sapiens nuclear transport factor 2 (placental protein 15) (PP15), mRNA
9685	22184	35159	0.58	1.0E-84	AF224511.1	NT	Homo sapiens Caz+-binding protein CABP3 (CABP3) gene, exon 6 and partial cds
9706	15561	28035	2.37	1.0E-84	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13), mRNA
9706	15561	28036	2.37	1.0E-84	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13), mRNA
11833	24198		2.44	1.0E-84	11417812	NT	Homo sapiens purinergic receptor P2X-like 1, orphan receptor (P2RXL1), mRNA
11943	24274	31017	3.97	1.0E-84	11418185	NT	Homo sapiens aconitase 2, mitochondrial (ACO2), mRNA
1002	13613		4.54	9.0E-85	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
1111	13715	26224	6.29	9.0E-85	U51432.1	NT	Homo sapiens nuclear protein Skip mRNA, complete cds
1111	13715	26225	6.29	9.0E-85	U51432.1	NT	Homo sapiens nuclear protein Skip mRNA, complete cds
1424	14017	26546	1.35	9.0E-85	4758669	NT	Homo sapiens leupaxin (LDPL), mRNA
1622	14215	26746	9.44	9.0E-85	M33282.1	NT	Human plasminogen gene, exon 7
1622	14215	26747	9.44	9.0E-85	M33282.1	NT	Human plasminogen gene, exon 7
1714	14306	26845	2.45	9.0E-85	7657020	NT	Homo sapiens DKFZp434P211 protein (DKFZp434P211), mRNA
4338	16925	29366	0.97	9.0E-85	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
5006	17579	30023	0.96	9.0E-85	5901979	NT	Homo sapiens heat shock transcription factor 2 binding protein (HSF2BP), mRNA
5038	17611	30055	1.02	9.0E-85	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C068
1175	13777	26287	10.28	7.0E-85	LD05094.1	NT	Homo sapiens ribosomal protein L27 mRNA, complete cds
11499	23948		11.38	7.0E-85	AF113210.1	NT	Homo sapiens MSTP030 mRNA, complete cds
11294	23746	36803	3.15	6.0E-85	11438573	NT	Homo sapiens DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 10 (RNA helicase) (DDX10), mRNA
11294	23746	36804	3.15	6.0E-85	11438573	NT	Homo sapiens DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 10 (RNA helicase) (DDX10), mRNA
2371	14941	27514	1.09	5.0E-85	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4525	17109		0.59	5.0E-85	AF211189.1	NT	Homo sapiens T-type calcium channel alpha1 subunit Alpha1-a isoform (CACNA11) mRNA, complete cds
5842	18271	30744	1.42	5.0E-85	BF035674.1	EST_HUMAN	601458846F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862402 5'
5842	18271	30745	1.42	5.0E-85	BF035674.1	EST_HUMAN	601458846F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862402 5'
10988	23512	36545	1.95	5.0E-85	AF224689.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
12589	17109		3.17	5.0E-85	AF211189.1	NT	Homo sapiens T-type calcium channel alpha1 subunit Alpha1-a isoform (CACNA11) mRNA, complete cds
6287	18905	31675	1.63	4.0E-85	BF677810.1	EST_HUMAN	602084730F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4249087 5'
6287	18905	31676	1.63	4.0E-85	BF677810.1	EST_HUMAN	602084730F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4249087 5'
10484	22958		1.64	4.0E-85	BE079263.1	EST_HUMAN	RC1-BT0623-120200-011-c07 BT0623 Homo sapiens cDNA
1342	13937	26458	0.86	3.0E-85	AF096157.1	NT	Homo sapiens protein phosphatase 2A BR gamma subunit gene, exon 8
1816	14408	26850	5.06	3.0E-85	T97495.1	EST_HUMAN	yes3g08.r1 Scarses fetal liver spleen 1NLS Homo sapiens cDNA clone IMAGE:121504 5'
4405	16990	29434	0.83	3.0E-85	BE267189.1	EST_HUMAN	601189704F2 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3533616 5'
5025	17599	30043	1.44	3.0E-85	11024695	NT	Homo sapiens F-box only protein 24 (FBXO24), mRNA
5025	17599	30044	1.44	3.0E-85	11024695	NT	Homo sapiens F-box only protein 24 (FBXO24), mRNA
6283	18891	31659	6.49	3.0E-85	7682309	NT	Homo sapiens KIAA0783 gene product (KIAA0783), mRNA
6283	18891	31660	6.49	3.0E-85	7682309	NT	Homo sapiens KIAA0783 gene product (KIAA0783), mRNA
7032	18588		7.22	3.0E-85	AJ404468.1	NT	Homo sapiens mRNA for dynein heavy chain (DNAH9 gene)
7428	19952	32817	0.95	3.0E-85	11416870	NT	Homo sapiens GTPase regulator associated with the focal adhesion kinase pp125(FAK); KIAA0821 protein (KIAA0821), mRNA
7813	20356	33284	1.55	3.0E-85	U44953.1	NT	Homo sapiens DENN mRNA, complete cds
8445	20895	33900	0.78	3.0E-85	11525828	NT	Homo sapiens CGI-81 protein (LOC51108), mRNA
8909	21447	34369	3.75	3.0E-85	11430899	NT	Homo sapiens phospholipase C, epsilon (PLCE), mRNA
9230	21852	34901	1.32	3.0E-85	11421422	NT	Homo sapiens small nuclear ribonucleoprotein polypeptide B' (SNRNPB2), mRNA
9230	21852	34902	1.32	3.0E-85	11421422	NT	Homo sapiens small nuclear ribonucleoprotein polypeptide B' (SNRNPB2), mRNA
10377	22871	35864	0.81	3.0E-85	AF088942.1	NT	Homo sapiens phospholipid scramblase mRNA, complete cds
11380	23832	36895	2.25	3.0E-85	5031660	NT	Homo sapiens EGF-like repeats and discoidin-like domains 3 (EDIL3), mRNA
12470	24595		2.19	3.0E-85	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
898	13609	26124	3.12	2.0E-85	7657268	NT	Homo sapiens KIAA0929 protein Mx2 interacting nuclear target (MINT) homolog (KIAA0929), mRNA
1078	13683	26194	2.1	2.0E-85	AF248540.1	NT	Homo sapiens intersectin 2 (SH3D1B) mRNA, complete cds
1450	14042	26570	3.85	2.0E-85	7706205	NT	Homo sapiens CGI-201 protein (LOC51340), mRNA
1465	14057	26590	32.65	2.0E-85	5174775	NT	Homo sapiens apolipoprotein C-II (APOC2) mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1465	14057	26591	32.65	2.0E-85	5174775	NT	Homo sapiens apolipoprotein C-II (APOC2) mRNA
2274	14848	27424	2.27	2.0E-85	U10525.1	NT	Human DNA polymerase beta gene, exons 12 and 13
2850	13976		8.53	2.0E-85	7657468	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
3057	15673	28149	1.18	2.0E-85	M30938.1	NT	Human Ku (p70/p80) subunit mRNA, complete cds
4427	17013	28455	7.95	2.0E-85	4505880	NT	Homo sapiens plasminogen (PLG) mRNA
4664	17246	29700	8.24	2.0E-85	4826977	NT	Homo sapiens reelin (RELN) mRNA
5036	17610	30054	1.19	2.0E-85	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
5313	17875	30297	1.73	2.0E-85	4502212	NT	Homo sapiens arginase, liver (ARG1) mRNA
9197	21714	34658	1.33	2.0E-85	A1760820.1	EST_HUMAN	w167h08.x1 NCI_CGAP_K1d12 Homo sapiens cDNA clone IMAGE:2398431 3' similar to contains element
9567	22067	35027	0.84	2.0E-85	A1814459.1	EST_HUMAN	MSR1 repetitive element;
10163	22658	35654	1.38	2.0E-85	A1886384.1	EST_HUMAN	w149d03.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2331461 3'
2326	14897		2.43	1.0E-85	BE794306.1	EST_HUMAN	w194d12.x1 NCI_CGAP_U12 Homo sapiens cDNA clone IMAGE:2443607 3'
2437	15004	27576	8.29	1.0E-85	BE618392.1	EST_HUMAN	601591416F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3945818 5'
2437	15004	27577	8.29	1.0E-85	BE618392.1	EST_HUMAN	601462817F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3866021 5'
9086	22195	35168	2.03	1.0E-85	BE257917.1	EST_HUMAN	601462817F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3866021 5'
10804	23327	36337	2.67	1.0E-85	AA778785.1	EST_HUMAN	601109738F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3350553 5'
10804	23327	36338	2.67	1.0E-85	AA778785.1	EST_HUMAN	245f03.s1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:453245 3'
10876	23397	36413	2.59	1.0E-85	BF311552.1	EST_HUMAN	245f03.s1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:453245 3'
10876	23397	36414	2.59	1.0E-85	BF311552.1	EST_HUMAN	601897003F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4126440 5'
10943	23459	36482	2.48	1.0E-85	Y00052.1	NT	601897003F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4126440 5'
11605	24048	37114	2.17	1.0E-85	A198420.1	EST_HUMAN	Human mRNA for T-cell cyclophilin
11838	24363	30969	4.42	1.0E-85	11417862	NT	q156a07.x1 NCI_CGAP_Bim25 Homo sapiens cDNA clone IMAGE:1860488 3'
12098	24363	30969	5.48	1.0E-85	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
1475	14067		17.55	9.0E-86	BE274217.1	EST_HUMAN	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
6275	18883	31651	1.65	8.0E-86	11424140	NT	601120778F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2967680 5'
11543	23991	37063	1.65	8.0E-86	4503224	NT	Homo sapiens similar to CDC28 protein kinase 1 (H. sapiens) (LOC63041), mRNA
244	12903	25384	0.88	7.0E-86	7662247	NT	Homo sapiens cytochrome P450, subfamily IIF, polypeptide 1 (CYP2F1) mRNA
972	13583	26096	1.06	7.0E-86	AA860801.1	EST_HUMAN	Homo sapiens KIAA0680 gene product (KIAA0680), mRNA
972	13583	26097	1.06	7.0E-86	AA860801.1	EST_HUMAN	aj88f08.s1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1403559 3'
6343	18949	31726	1.01	7.0E-86	9966886	NT	aj88f08.s1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1403559 3'
6343	18949	31727	1.01	7.0E-86	9966886	NT	Homo sapiens tumor endothelial marker 7 precursor (TEM7), mRNA
7053	18072	30463	5.8	7.0E-86	11421737	NT	Homo sapiens tumor endothelial marker 7 precursor (TEM7), mRNA
8079	21218	34138	3.41	7.0E-86	L38557.1	NT	Homo sapiens Tax1 (human T-cell leukemia virus type I) binding protein 1 (TAX1BP1), mRNA
							Homo sapiens galactosebrosidase (GALC) gene, exon 15

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9616	22116		1.53	7.0E-86	5453997	NT	Homo sapiens RAN binding protein 7 (RANBP7), mRNA
9673	22172	35148	1.92	7.0E-86	11526307	NT	Homo sapiens DiGeorge syndrome critical region gene 8 (DGCRC8), mRNA
10841	23382	36377	2.38	7.0E-86	11417012	NT	Homo sapiens similar to transcription factor CA150 (H. sapiens) (LOC63170), mRNA
10841	23362	36378	2.38	7.0E-86	11417012	NT	Homo sapiens similar to transcription factor CA150 (H. sapiens) (LOC63170), mRNA
11638	24077	37137	2.7	7.0E-86	AF233391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
1337	13931	26450	2.34	6.0E-86	4505482	NT	Homo sapiens oxoglutarate dehydrogenase (lipoamide) (OGDH), mRNA
228	12888	25373	2.46	4.0E-86	BE547173.1	EST_HUMAN	601072594F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3458830 5'
6185	18795	31563	10.86	4.0E-86	BE295943.1	EST_HUMAN	601176965F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3531953 5'
11120	12886	25373	1.86	4.0E-86	BE547173.1	EST_HUMAN	601072594F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3458830 5'
4377	16984	29410	0.84	3.0E-86	BE867703.1	EST_HUMAN	601443262F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3847455 5'
5782	18407	31123	6.23	3.0E-86	AW340946.1	EST_HUMAN	x292h12.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2871719 3'
8205	20748	33658	1.15	3.0E-86	AV722329.1	EST_HUMAN	AV722329 HTB Homo sapiens cDNA clone HTBBS004 5'
10121	22618	35606	3.12	3.0E-86	BE866479.1	EST_HUMAN	601509696F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3911303 5'
10121	22618	35607	3.12	3.0E-86	BE866479.1	EST_HUMAN	601509696F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3911303 5'
11312	23010	36018	10.63	3.0E-86	AI659240.1	EST_HUMAN	tu18b02.x1 NCI_CGAP_Pt28 Homo sapiens cDNA clone IMAGE:2251371 3'
11808	24893		3.18	3.0E-86	BE410354.1	EST_HUMAN	601302333F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3636753 5'
288	12844	25429	2.06	2.0E-86	AA306264.1	EST_HUMAN	EST177232 Jurkat T-cells VI Homo sapiens cDNA 5' end
439	13072		2.33	2.0E-86	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
1232	13831	26345	2.16	2.0E-86	NS8977.1	EST_HUMAN	yz18a08.r1 Soares multiple sclerosis_2NbrHMS Homo sapiens cDNA clone IMAGE:263478 5'
2233	14808	27381	1.95	2.0E-86	9635487	NT	Human endogenous retrovirus, complete genome
3462	16069	28542	1.36	2.0E-86	AW966142.1	EST_HUMAN	EST378215 MAGE resequences, MAGE Homo sapiens cDNA
3809	16408	28872	2.89	2.0E-86	AF156776.1	NT	Homo sapiens lysophosphatidic acid acyltransferase-delta (LPAAT-delta) mRNA, complete cds
3809	16408	28873	2.89	2.0E-86	AF156776.1	NT	Homo sapiens lysophosphatidic acid acyltransferase-delta (LPAAT-delta) mRNA, complete cds
4113	18707		3.01	2.0E-86	AW515742.1	EST_HUMAN	hd87g08.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2816542 3'
4804	17479	29937	3.25	2.0E-86	AF056480.1	NT	Homo sapiens cAMP-specific phosphodiesterase 8A (PDE8A) mRNA, partial cds
6032	18651	31392	1.55	2.0E-86	Z16411.1	NT	H. sapiens mRNA encoding phospholipase c
6032	18651	31393	1.55	2.0E-86	Z16411.1	NT	H. sapiens mRNA encoding phospholipase c
7134	24773	32284	0.86	2.0E-86	11418428	NT	Homo sapiens similar to ectonucleotide pyrophosphatase/phosphodiesterase 3 (H. sapiens) (LOC63214), mRNA
7952	20494	33403	0.6	2.0E-86	UB4744.1	NT	Human Chediak-Higashi syndrome protein short isoform (LYST) mRNA, complete cds
8453	20993		0.54	2.0E-86	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
8509	21048	33669	2.19	2.0E-86	11437135	NT	Homo sapiens butyrobetaine (gamma), 2-oxoglutarate dioxygenase (gamma-butyrobetaine hydroxylase) (BBOX), mRNA

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8509	21048	33970	2.19	2.0E-86	11437135	NT	Homo sapiens butyrobetaine (gamma), 2-oxoglutarate dioxygenase (gamma-butyrobetaine hydroxylase) (BBOX), mRNA
8834	21373	34298	1.29	2.0E-86	10863878	NT	Homo sapiens phospholipid scramblase 1 (PLSCR1), mRNA
9242	21768	34717	2.06	2.0E-86	11422084	NT	Homo sapiens chromosome segregation 1 (yeast homolog)-like (CSE1L), mRNA
10344	22838	35833	2.82	2.0E-88	11545846	NT	Homo sapiens basic-helix-loop-helix-PAS protein (NPAS3), mRNA
10344	22838	35834	2.82	2.0E-88	11545846	NT	Homo sapiens basic-helix-loop-helix-PAS protein (NPAS3), mRNA
10347	22841	35837	1.85	2.0E-86	11417120	NT	Homo sapiens hypothetical protein FLJ20125 (FLJ20125), mRNA
10397	22891	35885	0.85	2.0E-86	AB037832.1	NT	Homo sapiens mRNA for KIAA1411 protein, partial cds
10784	23308	36315	1.94	2.0E-86	4759051	NT	Homo sapiens ribosomal protein S6 kinase, 90kD, polypeptide 5 (RPS6KA5) mRNA
12269	24476	30935	3.82	2.0E-86	11418189	NT	Homo sapiens thyroid autoantigen 70kD (Ku antigen) (G22P1), mRNA
12452	24586		3.36	2.0E-86	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
1641	14233	28767	1.33	1.0E-86	4826855	NT	Homo sapiens NADH dehydrogenase (ubiquinone) Fe-S protein 1 (75kD) (NADH-coenzyme Q reductase) (NDUFS1) mRNA
3198	15810	28283	1.54	1.0E-86	5453649	NT	Homo sapiens fibulin 5 (FBLN5) mRNA
3272	15884	28366	3.1	1.0E-86	L20492.1	NT	Human gamma-glutamyl transpeptidase mRNA, complete cds
3335	15945	28420	1.24	1.0E-86	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
3335	15945	28421	1.24	1.0E-86	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
4018	16616	28090	0.96	1.0E-86	7706161	NT	Homo sapiens hypothetical protein (LOC51318), mRNA
4018	16616	28091	0.96	1.0E-86	7706161	NT	Homo sapiens hypothetical protein (LOC51318), mRNA
4351	16938	29380	5.98	1.0E-86	AL163300.2	NT	Homo sapiens chromosome 21 segment HS21C100
5042	17615	30059	0.9	1.0E-86	AF100751.1	NT	Homo sapiens FK506-binding protein FKBP23 isoform mRNA, complete cds
5741	18367	31074	1.62	1.0E-86	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
5559	18191		1.72	9.0E-87	AI150703.1	EST_HUMAN	qb77cd09.x1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:3322779 3'
7472	19994	32857	1.78	9.0E-87	4757721	NT	SW_KTCJ_MOUSE P02535 KERATIN, TYPE I CYTOSKELETAL 10
7472	19994	32858	1.78	9.0E-87	4757721	NT	Homo sapiens a disintegrin and metalloproteinase domain 22 (ADAM22), mRNA
505	13137	25625	84.06	8.0E-87	X62245.1	NT	Homo sapiens a disintegrin and metalloproteinase domain 22 (ADAM22), mRNA
2335	14906	27477	2.29	7.0E-87	BF063211.1	EST_HUMAN	O cuticulus mRNA for elongation factor 1 alpha
2335	14906	27478	2.29	7.0E-87	BF063211.1	EST_HUMAN	7n85f02.x1 NCI_CGAP_Cot6 Homo sapiens cDNA clone IMAGE:3322779 3'
6533	19133	31926	0.86	7.0E-87	AW890336.1	EST_HUMAN	7n85f02.x1 NCI_CGAP_Cot6 Homo sapiens cDNA clone IMAGE:3322779 3'
8130	20671	33581	2.87	7.0E-87	BF352776.1	EST_HUMAN	MF0-NT0039-020500-004-a11 NT0039 Homo sapiens cDNA
9375	20314	33216	0.67	7.0E-87	BE712961.1	EST_HUMAN	IL3-HT0619-060700-198-D10 HT0619 Homo sapiens cDNA
9983	22478	35460	3.7	7.0E-87	AL043314.2	EST_HUMAN	IL5-HT0702-160600-103-d08 HT0702 Homo sapiens cDNA
9983	22478	35461	3.7	7.0E-87	AL043314.2	EST_HUMAN	DKFZp434N0323_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434N0323 5'
							DKFZp434N0323_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434N0323 5'



Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10770	23294	36299	11	7.0E-87	K03002.1	NT	Human mRNA from chromosome 15 gene with homology to MHC-HLA-SB-1 Intron A
10770	23294	36300	11	7.0E-87	K03002.1	NT	Human mRNA from chromosome 15 gene with homology to MHC-HLA-SB-1 Intron A
3579	16183	28685	0.82	6.0E-87	7657213	NT	Homo sapiens homonally upregulated neu tumor-associated kinase (HUNK), mRNA
6553	19151	31947	1.54	6.0E-87	AB028004.1	NT	Homo sapiens mRNA for KIAA1081 protein, partial cds
10603	23137		6.8	6.0E-87	11432444	NT	Homo sapiens similar to SET translocation (myeloid leukemia-associated) (H. sapiens) (LOC63102), mRNA
1200	13801	26313	2.58	5.0E-87	AA382811.1	EST_HUMAN	EST196094 Testis 1 Homo sapiens cDNA 5' end
12100	13801	26313	2.47	5.0E-87	AA382811.1	EST_HUMAN	EST196094 Testis 1 Homo sapiens cDNA 5' end
1001	13612	26126	0.85	4.0E-87	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
1214	13614	26328	11.73	4.0E-87	AB037835.1	NT	Homo sapiens mRNA for KIAA1414 protein, partial cds
1476	14068	26605	3.14	4.0E-87	R78133.1	EST_HUMAN	y60710.1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:145579 5' similar to contains Alu repetitive element
2466	15033	27599	2.57	4.0E-87	7708299	NT	Homo sapiens CGI-60 protein (LOC51628), mRNA
2466	15033	27600	2.57	4.0E-87	7708299	NT	Homo sapiens CGI-60 protein (LOC51628), mRNA
3511	16116	28595	1.82	4.0E-87	5174574	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (t(11q24) (Drosophila) homolog); translocated to, 4 (MLLT4) mRNA
5439	17994		0.92	4.0E-87	AL163281.2	NT	Homo sapiens chromosome 21 segment HS21C081
5637	18266	30738	11.09	4.0E-87	000321	SWISSPROT	ETS-RELATED PROTEIN 71 (ETS TRANSLOCATION VARIANT 2)
5825	18547	31273	0.72	4.0E-87	U85429.1	NT	Human transcription factor NFATx3 mRNA, complete cds
6196	18808	31575	4.42	4.0E-87	BE247284.1	EST_HUMAN	TCBAP1E 4051 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP 4051
11044	23558	36594	5.04	4.0E-87	M60676.1	NT	Human von Willebrand factor pseudogene corresponding to exons 23 through 34
11823	24065	37130	2.12	4.0E-87	11417339	NT	Homo sapiens similar to heat shock 70kD protein 9B (mortalin-2) (H. sapiens) (LOC63184), mRNA
12202	24947	30623	1.81	4.0E-87	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
12202	24947	30624	1.81	4.0E-87	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
12371	24541		17.18	4.0E-87	11417812	NT	Homo sapiens purinergic receptor P2X-like 1, orphan receptor (P2RX1), mRNA
2805	15357	27924	2.34	2.0E-87	4885420	NT	Homo sapiens high-mobility group (nonhistone chromosomal) protein 4 (HMG4) mRNA
2975	15591		1.1	2.0E-87	BF327920.1	EST_HUMAN	QV0-BN0148-050600-254-e03 BN0148 Homo sapiens cDNA
3652	16450	28913	0.78	2.0E-87	AU116935.1	EST_HUMAN	AU116935 HEMBA1 Homo sapiens cDNA clone HEMBA1000307 5'
5039	17612	30058	0.9	2.0E-87	BF376311.1	EST_HUMAN	CMO-TN0038-150900-552108 TN0038 Homo sapiens cDNA
5842	18468	31191	12.69	2.0E-87	BE734190.1	EST_HUMAN	601569041F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3843730 5'
5842	18468	31192	12.69	2.0E-87	BE734190.1	EST_HUMAN	601569041F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3843730 5'
6468	19069		6.41	2.0E-87	BE587193.1	EST_HUMAN	601341363F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3683348 5'
6900	18391	32206	2.12	2.0E-87	N48128.1	EST_HUMAN	y21e07.1 Soares fetal liver spleen 1N1FLS Homo sapiens cDNA clone IMAGE:243386 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6877	19611	32444	0.93	2.0E-87	AV654143.1	EST_HUMAN	AV654143 GLC Homo sapiens cDNA clone GLCDSG04.3'
7225	19756	32611	1.43	2.0E-87	BE294432.1	EST_HUMAN	601176032F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3531511.5'
7277	19805	32664	0.76	2.0E-87	11433046	NT	Homo sapiens hec domain and RLD 2 (HERC2), mRNA
7476	19888	32863	31.97	2.0E-87	N48128.1	EST_HUMAN	y21e07.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:243396.5'
7676	20187	33075	33.12	2.0E-87	N48128.1	EST_HUMAN	y21e07.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:243396.5'
8334	20875	33797	15.93	2.0E-87	X52851.1	NT	Human cyclophilin gene for cyclophilin (EC 5.2.1.8)
9700	22199		5.14	2.0E-87	BE531136.1	EST_HUMAN	601278315F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3610539.5'
1224	15392		1.66	1.0E-87	7705683	NT	Homo sapiens putative glycolipid transfer protein (LOC51054), mRNA
1478	14070	26807	1.21	1.0E-87	AW361977.1	EST_HUMAN	PM2-CT0265-141099-001-g04 CT0265 Homo sapiens cDNA
1478	14070	26808	1.21	1.0E-87	AW361977.1	EST_HUMAN	PM2-CT0265-141099-001-g04 CT0265 Homo sapiens cDNA
3772	16373	28838	6.15	1.0E-87	Y00052.1	NT	Human mRNA for T-cell cyclophilin
3766	16366	28861	2.65	1.0E-87	4758827	NT	Homo sapiens neurexin III (NRXN3) mRNA
5283	17845	30272	1.14	1.0E-87	U60949.1	NT	Rattus norvegicus taste bud receptor protein TB 641 (TB 641) gene, complete cds
6374	18978	31756	2.17	1.0E-87	AF073371.1	NT	Homo sapiens growth factor receptor-bound protein 10 (GRB10) gene, exon 8
6374	18978	31757	2.17	1.0E-87	AF073371.1	NT	Homo sapiens growth factor receptor-bound protein 10 (GRB10) gene, exon 8
7229	19760	32615	0.72	1.0E-87	AF039517.1	NT	Homo sapiens corticotrophin-releasing factor type 1 receptor gene, exon 8
7228	19760	32616	0.72	1.0E-87	AF039517.1	NT	Homo sapiens corticotrophin-releasing factor type 1 receptor gene, exon 8
7235	19765	32621	1	1.0E-87	4508786	NT	Homo sapiens IQ motif containing GTPase activating protein 1 (IQGAP1) mRNA
7430	19954	32619	1.18	1.0E-87	11431560	NT	Homo sapiens protein kinase C, beta 1 (PRKCB1), mRNA
8059	20601	33511	10.74	1.0E-87	AF214562.1	NT	Homo sapiens tracheal epithelium enriched protein (PLUNC) gene, complete cds
8840	21379	34302	1.01	1.0E-87	AB022918.1	NT	Homo sapiens mRNA for alpha2,3-sialyltransferase ST3Gal VI, complete cds
8840	21379	34303	1.01	1.0E-87	AB022918.1	NT	Homo sapiens mRNA for alpha2,3-sialyltransferase ST3Gal VI, complete cds
9551	22051	35013	3.71	1.0E-87	BE18183.1	EST_HUMAN	RC6-BN0278-050700-012-E02 BN0276 Homo sapiens cDNA
9551	22051	35014	3.71	1.0E-87	BE18183.1	EST_HUMAN	RC6-BN0278-050700-012-E02 BN0276 Homo sapiens cDNA
10275	22770	35758	0.89	1.0E-87	M34426.1	NT	Human L-plastin mRNA, 5' end
10611	23144	36155	2.84	1.0E-87	5729867	NT	Homo sapiens hec domain and RLD 2 (HERC2), mRNA
10878	23399		1.82	1.0E-87	D10083.1	NT	Homo sapiens RGH1 gene, retrovirus-like element
12198	25096		2.92	1.0E-87	7657632	NT	Homo sapiens sulfotransferase-related protein (SULTX3), mRNA
955	13587	26081	5.21	9.0E-88	5453887	NT	Homo sapiens protease inhibitor 4 (kallistatin) (PI4) mRNA
1145	13748	26257	8.79	9.0E-88	AF167465.1	NT	Homo sapiens double stranded RNA activated protein kinase (PKR) gene, exon 12
1393	13987	26514	2.74	9.0E-88	AB037820.1	NT	Homo sapiens mRNA for KIAA1399 protein, partial cds
1393	13987	26515	2.74	9.0E-88	AB037820.1	NT	Homo sapiens mRNA for KIAA1399 protein, partial cds
3689	16290	28759	1.7	9.0E-88	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
4356	16943	29385	3.11	9.0E-88	X91929.1	NT	H.sapiens ECE-1 gene (exon 9)

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4356	16943	28386	3.11	9.0E-88	X91929.1	NT	H.sapiens ECE-1 gene (exon 9)
5146	17716	30147	1.11	9.0E-88	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
8951	21489	34412	3.16	6.0E-88	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
1868	14454		0.96	5.0E-88	7661987	NT	Homo sapiens KIAA0063 gene product (KIAA0063), mRNA
2666	15224	27797	2.31	5.0E-88	N89399.1	EST_HUMAN	K9719F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone K9719 5' similar to ZINC FINGER PROTEIN HZF1
3031	15647	28125	0.77	5.0E-88	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
3044	15660	28140	0.91	5.0E-88	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
3044	15660	28141	0.91	5.0E-88	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
3436	16044		2.91	5.0E-88	AI693217.1	EST_HUMAN	w668108.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2336799 3' similar to contains Alu repetitive element; contains element MER22 MER22 repetitive element
3588	16192	28676	0.76	5.0E-88	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
4843	17421	29874	0.79	5.0E-88	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
6868	19802	32434	2.99	5.0E-88	H10932.1	EST_HUMAN	ym06b10.r1 Soares infant brain N1B Homo sapiens cDNA clone IMAGE:47129 5'
7870	20412	33318	1.73	5.0E-88	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
9236	21762	34708	0.54	5.0E-88	BF680206.1	EST_HUMAN	602154958F1 NIH_MGC 83 Homo sapiens cDNA clone IMAGE:4285775 5'
11942	14454		1.37	5.0E-88	7661887	NT	Homo sapiens KIAA0063 gene product (KIAA0063), mRNA
1374	13968	26495	1.93	4.0E-88	BF091229.1	EST_HUMAN	PM1-TN0028-050900-004-f10 TN0028 Homo sapiens cDNA
1374	13968	26498	1.93	4.0E-88	BF091229.1	EST_HUMAN	PM1-TN0028-050900-004-f10 TN0028 Homo sapiens cDNA
7292	16820	32679	2.25	4.0E-88	11416585	NT	Homo sapiens transforming growth factor, beta-induced, 68kD (TGFB1), mRNA
10789	23312	36320	1.93	4.0E-88	4502694	NT	Homo sapiens cell division cycle 10 (homologous to CDC10 of S. cerevisiae) (CDC10) mRNA
11362	23814	36874	2.42	4.0E-88	7661947	NT	Homo sapiens KIAA0152 gene product (KIAA0152), mRNA
11362	23814	36875	2.42	4.0E-88	7661947	NT	Homo sapiens KIAA0152 gene product (KIAA0152), mRNA
761	13380	25877	0.96	3.0E-88	11545800	NT	Homo sapiens hypothetical protein FLJ21634 (FLJ21634), mRNA
1848	14436		2.59	3.0E-88	4508020	NT	Homo sapiens zinc finger protein 259 (ZNF259) mRNA
2974	15590	28073	4.76	3.0E-88	N68951.1	EST_HUMAN	zs4812.s1 Soares fetal liver spleen 1NPLS Homo sapiens cDNA clone IMAGE:295823 3'
4325	16911	28352	0.64	3.0E-88	4501912	NT	Homo sapiens a disintegrin and metalloproteinase domain 23 (ADAM23) mRNA
4325	16911	28353	0.64	3.0E-88	4501912	NT	Homo sapiens a disintegrin and metalloproteinase domain 23 (ADAM23) mRNA
4576	17159		4.33	3.0E-88	11429300	NT	Homo sapiens hypothetical protein FLJ20220 (FLJ20220), mRNA
5502	18136	30546	2.95	3.0E-88	11429567	NT	Homo sapiens valosin-containing protein (VCP), mRNA
5773	18398	31112	4.24	3.0E-88	9966898	NT	Homo sapiens polycythemia rubra vera 1; cell surface receptor (PRV1), mRNA
5882	18504	31230	3.86	3.0E-88	11420697	NT	Homo sapiens v-rat simian leukemia viral oncogene homolog A (as related) (RALA), mRNA

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6309	18916	31690	1.3	3.0E-88	11417370	NT	Homo sapiens interleukin 13 (IL13), mRNA
6545	24764	31938	0.99	3.0E-88	11419210	NT	Homo sapiens activator of S phase kinase (ASK), mRNA
6545	24764	31939	0.99	3.0E-88	11419210	NT	Homo sapiens activator of S phase kinase (ASK), mRNA
7125	19465	32283	15.2	3.0E-88	AF279265.1	NT	Homo sapiens putative anion transporter 1 mRNA, complete cds
7546	20066	32940	5.75	3.0E-88	11436400	NT	Homo sapiens retinoblastoma-binding protein 2 (RBBP2), mRNA
7861	20403	33310	9.25	3.0E-88	11421726	NT	Homo sapiens growth differentiation factor 5 (cartilage-derived morphogenetic protein-1) (GDF5), mRNA
8137	20678	33589	1.57	3.0E-88	AF034374.1	NT	Homo sapiens molybdenum cofactor biosynthesis protein A and molybdenum cofactor biosynthesis protein C mRNA, complete cds
9355	20284	33193	2.09	3.0E-88	11528282	NT	Homo sapiens v-ets avian erythroblastosis virus E26 oncogene related (ERG), mRNA
9841	22339	35320	0.67	3.0E-88	AB015228.1	NT	Homo sapiens mRNA for RALDH2-T, complete cds
9841	22339	35321	0.67	3.0E-88	AB015228.1	NT	Homo sapiens mRNA for RALDH2-T, complete cds
9867	22364	35343	0.89	3.0E-88	11439065	NT	Homo sapiens acyl-Coenzyme A dehydrogenase family, member 8 (ACAD8), mRNA
11928	24263		5.36	3.0E-88	11417974	NT	Homo sapiens transcobalamin II; macrocytic anemia (TCN2), mRNA
11944	24954	30828	1.26	3.0E-88	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
12669	24738	30826	1.41	3.0E-88	11526140	NT	Homo sapiens protease, serine, 7 (enterokinase) (PRSS7), mRNA
1074	13679	26186	1.87	2.0E-88	7305198	NT	Homo sapiens Caldesin, presenilin-binding protein, EF hand transcription factor (CSEN), mRNA
1665	14258	26792	1.57	2.0E-88	AF246219.1	NT	Homo sapiens SNARE protein kinase SNAK mRNA, complete cds
1786	14376	26920	4.58	2.0E-88	AF246219.1	NT	Homo sapiens SNARE protein kinase SNAK mRNA, complete cds
4516	17100	29547	2.07	2.0E-88	5031668	NT	Homo sapiens dyx11c1, axonal, light polypeptide 4 (DNAL4), mRNA
6070	18687	31430	5.11	1.0E-88	AW139565.1	EST_HUMAN	UI-H-B11-aea-d-04-Q-U1.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2718750 3'
6070	18687	31431	5.11	1.0E-88	AW139565.1	EST_HUMAN	UI-H-B11-aea-d-04-Q-U1.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2718750 3'
6753	19346	32153	22.7	1.0E-88	AB007877.1	NT	Homo sapiens KIAA0417 mRNA, complete cds
6753	19346	32154	22.7	1.0E-88	AB007877.1	NT	Homo sapiens KIAA0417 mRNA, complete cds
7176	19708	32556	1.3	1.0E-88	AF09034.1	EST_HUMAN	wq70a12.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2476606 3'
7236	19766	32622	4.05	1.0E-88	AA486981.1	EST_HUMAN	aa54a11.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:824732 3' similar to WP:B0272.2
9166	21743	34686	0.9	1.0E-88	AA190368.1	EST_HUMAN	CE00851
9499	21999	34956	3.09	1.0E-88	AL043314.2	EST_HUMAN	zp87c02.11 Stratagene HeLa cell s3 937216 Homo sapiens cDNA clone IMAGE:627170 5' similar to SW:POL1 HUMAN P10266 RETROVIRUS-RELATED POL POLYPROTEIN
11319	23017	36026	6.14	1.0E-88	AA991479.1	EST_HUMAN	DKFZp434N0323_r1 434 (synonym: hbs3) Homo sapiens cDNA clone DKFZp434N0323 5'
12160	24400		5.36	1.0E-88	AL163246.2	NT	os91903.s1 NCI_CGAP_GC3 Homo sapiens cDNA clone IMAGE:1612756 3' similar to gb:M16342
10830	23351	36366	3.56	9.0E-89	11421238	NT	HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEINS C1/C2 (HUMAN); Homo sapiens chromosome 21 segment HS21C046
							Homo sapiens transgelin 2 (TAGLN2), mRNA

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2763	15317	27884	1.05	8.0E-89	BE311557.1	EST_HUMAN	601142409F1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:3506186 5'
7012	19510	32331	1.07	8.0E-89	11421514	NT	Homo sapiens similar to sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3A (H. sapiens) (LOC63232), mRNA
458	13092	25585	1.26	7.0E-89	7657213	NT	Homo sapiens hormonally upregulated neu tumor-associated kinase (HUNK), mRNA
458	13092	25588	1.26	7.0E-89	7657213	NT	Homo sapiens hormonally upregulated neu tumor-associated kinase (HUNK), mRNA
5012	17586	30029	2.51	7.0E-89	4557390	NT	Homo sapiens complement component 8, beta polypeptide (C8B), mRNA
5084	17637	30080	6.15	7.0E-89	AL045748.1	EST_HUMAN	DKFZp434E246 r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434E246 5'
5623	18252	30720	1.28	7.0E-89	X99832.1	NT	H. sapiens CLN3 gene, complete CDS
5623	18252	30721	1.28	7.0E-89	X99832.1	NT	H. sapiens CLN3 gene, complete CDS
6483	19084	31885	1.08	7.0E-89	7549808	NT	Homo sapiens plasmin 3 (T isoform) (PLS3), mRNA
6483	19084	31886	1.08	7.0E-89	7549808	NT	Homo sapiens plasmin 3 (T isoform) (PLS3), mRNA
7510	20031	32896	1.86	7.0E-89	11420754	NT	Homo sapiens actin related protein 2/3 complex, subunit 1A (41 kD) (ARPC1A), mRNA
7820	20362	33269	0.51	7.0E-89	11417118	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
7820	20362	33270	0.51	7.0E-89	11417118	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
8415	20955	33872	0.83	7.0E-89	J02923.1	NT	Human 65-kilodalton phosphoprotein (p65) mRNA, complete cds
10423	22917	35917	1.3	7.0E-89	X62048.1	NT	H. sapiens Wee1 hu gene
10423	22917	35918	1.3	7.0E-89	X62048.1	NT	H. sapiens Wee1 hu gene
10440	22834	35942	0.97	7.0E-89	AB020630.1	NT	Homo sapiens mRNA for KIAA0823 protein, partial cds
10440	22834	35943	0.97	7.0E-89	AB020630.1	NT	Homo sapiens mRNA for KIAA0823 protein, partial cds
12604	24905		1.86	7.0E-89	J05235.1	NT	Human gamma-glutamyl transpeptidase mRNA, complete cds
1081	13686	26177	1.41	6.0E-89	5803114	NT	Homo sapiens inner membrane protein, mitochondrial (mitofilin) (IMMT), mRNA
2254	14828	27404	1.24	6.0E-89	4506124	NT	Homo sapiens serine/threonine-protein kinase PRP4 homolog (PRP4) mRNA
2477	15044	27611	1.37	6.0E-89	4507788	NT	Homo sapiens ubiquitin-conjugating enzyme E2L 3 (UBE2L3) mRNA
2477	15044	27612	1.37	6.0E-89	4507788	NT	Homo sapiens ubiquitin-conjugating enzyme E2L 3 (UBE2L3) mRNA
3577	18181	28683	0.91	6.0E-89	7681817	NT	Homo sapiens HSPC159 protein (HSPC159), mRNA
4743	17324	29765	3	6.0E-89	AB007866.2	NT	Homo sapiens mRNA for KIAA0406 protein, partial cds
4743	17324	29766	3	6.0E-89	AB007866.2	NT	Homo sapiens mRNA for KIAA0406 protein, partial cds
5366	17926	30340	0.62	6.0E-89	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
5366	17926	30341	0.62	6.0E-89	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
5234	17798	30216	2.68	5.0E-89	BE244323.1	EST_HUMAN	TCBAP2E0383 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP0383
5234	17798	30217	2.68	5.0E-89	BE244323.1	EST_HUMAN	TCBAP2E0383 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP0383
7587	20102	32877	0.91	4.0E-89	BE762749.1	EST_HUMAN	QV3-NT0022-080800-219-g03 NT0022 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11020	23534	36570	1.69	4.0E-89	A1798672.1	EST_HUMAN	w91c03.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2348452 3'
2901	15518	27988	2.21	3.0E-89	AW976181.1	EST_HUMAN	EST388290 MAGC resequences, MAGN Homo sapiens cDNA
7194	18725	32575	1.5	3.0E-89	A1217359.1	EST_HUMAN	qh17b06.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1844915 3'
10678	23210	38221	2.24	3.0E-89	N57357.1	EST_HUMAN	yw86e11.r1 Soares_placenta_8to9weeks_2NbHP8b09W Homo sapiens cDNA clone IMAGE:259148 5'
12270	24840	30799	2.82	3.0E-89	AV708431.1	EST_HUMAN	similar to SW:PI4K_HUMAN P42356 PHOSPHATIDYLINOSITOL 4-KINASE ALPHA ;
12364	24537	30902	1.32	3.0E-89	AV705749.1	EST_HUMAN	AV708431 ADC Homo sapiens cDNA clone ADCARE02 5'
132	13066	25561	0.74	2.0E-89	7706670	NT	AV705749 ADB Homo sapiens cDNA clone ADBBGA01 5'
132	13066	25562	0.74	2.0E-89	7706670	NT	Homo sapiens PXR2b protein (PXR2b), mRNA
433	13066	25561	0.65	2.0E-89	7706670	NT	Homo sapiens PXR2b protein (PXR2b), mRNA
433	13066	25562	0.65	2.0E-89	7706670	NT	Homo sapiens PXR2b protein (PXR2b), mRNA
1826	14415	26962	1.71	2.0E-89	AJ238277.1	NT	Homo sapiens mRNA for cancer-testis-associated protein (CTP11) gene
2905	15522	27992	1.84	2.0E-89	A1222095.1	EST_HUMAN	qg96c08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1843022 3' similar to gb:J04131
3608	16212	28691	0.67	2.0E-89	AA759149.1	EST_HUMAN	GAMMA-GLUTAMYLTRANSPEPTIDASE 1 PRECURSOR (HUMAN)/contains Alu repetitive element;
3608	16212	28692	0.67	2.0E-89	AA759149.1	EST_HUMAN	ah70e03.s1 Soares_testis_NHT Homo sapiens cDNA clone 1320988 3'
4226	16814	29261	1.18	2.0E-89	AF089897.1	NT	ah70e03.s1 Soares_testis_NHT Homo sapiens cDNA clone 1320988 3'
4233	16821	29271	5.23	2.0E-89	X58742.1	NT	Homo sapiens topoisomerase-related function protein (TRF4-2) mRNA, partial cds
4233	16821	29272	5.23	2.0E-89	X58742.1	NT	H. sapiens HCK gene for tyrosine kinase (PTK), exons 10-11
4441	17027	29467	0.7	2.0E-89	AL163203.2	NT	H. sapiens HCK gene for tyrosine kinase (PTK), exons 10-11
4596	17179	29626	1.52	2.0E-89	AJ007378.1	NT	Homo sapiens chromosome 21 segment HS21C003
5546	18178		1.07	2.0E-89	BE541744.1	EST_HUMAN	Homo sapiens GGT gene, exon 5
5672	18299	30780	3.13	2.0E-89	AB007546.1	NT	601065909F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3452423 5'
5860	18582	31316	1.44	2.0E-89	U03985.1	NT	Homo sapiens gene for LECT2, complete cds
6359	18982	31739	0.7	2.0E-89	AL163285.2	NT	Human N-ethylmaleimide-sensitive factor mRNA, partial cds
7664	20176	33063	4.46	2.0E-89	U81004.1	NT	Homo sapiens chromosome 21 segment HS21C085
7875	20417	33325	3.22	2.0E-89	11428801	NT	Human GT24 (GT24) mRNA, partial cds
8356	20896	33816	1	2.0E-89	AJ245503.1	NT	Homo sapiens solute carrier family 24 (sodium/potassium/calcium exchanger), member 2 (SLC24A2), mRNA
9177	21754	34701	0.69	2.0E-89	AB037754.1	NT	Homo sapiens partial mRNA for PEX5 related protein
9724	22222	35197	0.65	2.0E-89	AF170814.1	NT	Homo sapiens mRNA for KIAA1333 protein, partial cds
9724	22222	35198	0.65	2.0E-89	AF170814.1	NT	Homo sapiens CaBP5 (CABP5) gene, exon 5
9724	22222	35198	0.65	2.0E-89	AF170814.1	NT	Homo sapiens CaBP5 (CABP5) gene, exon 5

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11252	23782	36838	2.58	2.0E-89	11434411	NT	Homo sapiens integrin, alpha 3 (antigen CD49C, alpha 3 subunit of VLA-3 receptor) (ITGA3), mRNA
11444	23894	36959	5.1	2.0E-89	11433673	NT	Homo sapiens cell adhesion molecule with homology to L1CAM (close homologue of L1) (CHL1), mRNA
11564	24011	37081	2.25	2.0E-89	U10692.1	NT	Human IMAGE-7 antigen (IMAGE7) pseudogene, complete cds
11449	23899	36965	8.8	1.0E-89	BF196052.1	EST_HUMAN	h81408.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3134897 3' similar to TR:O54778 O54778 SOLUTE CARRIER FAMILY 22-LIKE 2 PROTEIN ;
11449	23899	36966	8.8	1.0E-89	BF196052.1	EST_HUMAN	h81409.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3134897 3' similar to TR:O54778 O54778 SOLUTE CARRIER FAMILY 22-LIKE 2 PROTEIN ;
8169	20710	33626	1.59	9.0E-90	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
8169	20710	33627	1.59	9.0E-90	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
1101	13706	26214	1.9	8.0E-90	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
1102	13706	26214	2.3	8.0E-90	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
1375	15439	26497	4.58	8.0E-90	BE870561.1	EST_HUMAN	7a36f08.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3284583 3'
1375	15439	26498	4.58	8.0E-90	BE870561.1	EST_HUMAN	7a36f08.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3284583 3'
8495	21034	33955	0.68	8.0E-90	BE177830.1	EST_HUMAN	RC1-HT0598-120400-022-b08 HT0598 Homo sapiens cDNA
10579	23114	36127	1.61	8.0E-90	A1222095.1	EST_HUMAN	qg96c08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1843022 3' similar to gb:J04131 GAMMA-GLUTAMYLTRANSEPTIDASE 1 PRECURSOR (HUMAN); contains Alu repetitive element;
10579	23114	36128	1.61	8.0E-90	A1222095.1	EST_HUMAN	qg96c08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1843022 3' similar to gb:J04131 GAMMA-GLUTAMYLTRANSEPTIDASE 1 PRECURSOR (HUMAN); contains Alu repetitive element;
889	13484		4.46	7.0E-90	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-48, and partial cds, alternatively spliced
8363	20903		1.73	7.0E-90	AA782977.1	EST_HUMAN	ai63408.s1 Soares_testis_NHT Homo sapiens cDNA clone 1375503 3'
8896	21434	34357	1.47	7.0E-90	BE962525.2	EST_HUMAN	601655837R1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3855824 3'
8896	21434	34358	1.47	7.0E-90	BE962525.2	EST_HUMAN	601655837R1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3855824 3'
10042	22537	35533	2.15	7.0E-90	H68849.1	EST_HUMAN	y86a04.s1 Soares fetal liver spleen 1NFSL Homo sapiens cDNA clone IMAGE:212190 3' similar to SP:C1TC_HUMAN P11586 C-1-TETRAHYDROFOLATE SYNTHASE, CYTOPLASMIC ;
10042	22537	35534	2.15	7.0E-90	H68849.1	EST_HUMAN	y86a04.s1 Soares fetal liver spleen 1NFSL Homo sapiens cDNA clone IMAGE:212190 3' similar to SP:C1TC_HUMAN P11586 C-1-TETRAHYDROFOLATE SYNTHASE, CYTOPLASMIC ;
10352	22846	35840	0.69	7.0E-90	BF526089.1	EST_HUMAN	602071208F1 NCI_CGAP_Brm64 Homo sapiens cDNA clone IMAGE:4214257 5'
3104	15719	28189	1.18	6.0E-90	X91926.1	NT	H. sapiens ECE-1 gene (exon 6)
3104	15719	28190	1.18	6.0E-90	X91926.1	NT	H. sapiens ECE-1 gene (exon 6)

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4311	16897	29341	8.68	6.0E-90	8922398	NT	Homo sapiens hypothetical protein FLJ10388 (FLJ10388), mRNA
4311	16897	29342	8.68	6.0E-90	8922398	NT	Homo sapiens hypothetical protein FLJ10388 (FLJ10388), mRNA
6137	18751	31508	3.08	6.0E-90	U77700.1	NT	Homo sapiens HsGCN1 mRNA, partial cds
6137	18751	31509	3.08	6.0E-90	U77700.1	NT	Homo sapiens HsGCN1 mRNA, partial cds
8269	20810	33730	3.18	6.0E-90	4504794	NT	Homo sapiens inositol 1,4,5-triphosphate receptor, type 3 (ITPR3) mRNA
8269	20810	33731	3.18	6.0E-90	4504794	NT	Homo sapiens inositol 1,4,5-triphosphate receptor, type 3 (ITPR3) mRNA
166	12828		24.29	5.0E-90	AB035344.1	NT	Homo sapiens TGL6 gene, exon 1-10b
1234	13833	26347	2.39	5.0E-90	U80226.1	NT	Human gamma-aminobutyric acid transaminase mRNA, partial cds
1858	14446	27002	2.57	5.0E-90	A1222095.1	EST_HUMAN	qg96c08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1843022 3' similar to gb:J04131 GAMMA-GLUTAMYL-TRANSPETIDASE 1 PRECURSOR (HUMAN); contains Alu repetitive element;
1858	14446	27003	2.57	5.0E-90	A1222095.1	EST_HUMAN	qg96c08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1843022 3' similar to gb:J04131 GAMMA-GLUTAMYL-TRANSPETIDASE 1 PRECURSOR (HUMAN); contains Alu repetitive element;
2591	15153	27720	4.06	5.0E-90	AF114487.1	NT	Homo sapiens intersecin long isoform (ITSN) mRNA, complete cds
4638	17220	29874	10.01	5.0E-90	4508354	NT	Homo sapiens pregnancy-zone protein (PZP) mRNA
4660	17242	29696	0.64	5.0E-90	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
5777	18402	31118	2.63	5.0E-90	Z16411.1	NT	H. sapiens mRNA encoding phospholipase c
5871	18493	31220	1.13	5.0E-90	AB015617.1	NT	Homo sapiens ELKS mRNA, complete cds
5939	18402	31118	2.21	5.0E-90	Z16411.1	NT	H. sapiens mRNA encoding phospholipase c
7267	19795	32651	2.56	5.0E-90	AF113708.1	NT	Homo sapiens angiotensin 4 (ANG4) mRNA, partial cds
7267	19795	32652	2.56	5.0E-90	AF113708.1	NT	Homo sapiens angiotensin 4 (ANG4) mRNA, partial cds
7564	20081	32957	13.89	5.0E-90	4557258	NT	Homo sapiens adenylate cyclase 9 (ADCY9) mRNA
8234	20775	33687	4.57	5.0E-90	11345483	NT	Homo sapiens similar to ectonucleotide pyrophosphatase/phosphodiesterase 3 (H. sapiens) (LOC83214), mRNA
9598	22098	35061	1.24	5.0E-90	11419428	NT	mRNA
10181	22676	35669	0.71	5.0E-90	AF123303.1	NT	Homo sapiens calcium-binding transporter mRNA, partial cds
10311	22805	35797	0.53	5.0E-90	11417118	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
10311	22805	35798	0.53	5.0E-90	11417118	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
10343	22837	35832	8.78	5.0E-90	11433721	NT	Homo sapiens ATPase, aminophospholipid transporter-like, Class I, type 8A, member 2 (ATP8A2), mRNA
10398	22893	35887	0.51	5.0E-90	7662051	NT	Homo sapiens KIAA0317 gene product (KIAA0317), mRNA
10399	22893	35888	0.51	5.0E-90	7662051	NT	Homo sapiens KIAA0317 gene product (KIAA0317), mRNA
10795	23318	36328	3.38	5.0E-90	D49387.1	NT	Human mRNA for NADP dependent leukotriene b4 12-hydroxydehydrogenase, partial cds



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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
12421	24607		1.8	5.0E-90	AB011398.1	NT	Homo sapiens gene for AF-4, complete cds
12471	24596		5.4	5.0E-90	AF233366.1	EST_HUMAN	at78h05.x1 Barstead aorta HPLRB6 Homo sapiens cDNA clone IMAGE:2128761 3'
324	12978	25466		4.0E-90	AF231920.1	NT	Homo sapiens chromosome 21 unknown mRNA
324	12978	25467	1.61	4.0E-90	AF231920.1	NT	Homo sapiens chromosome 21 unknown mRNA
1125	13728	26239	4.34	4.0E-90	4505316	NT	Homo sapiens myosin phosphatase, target subunit 1 (MYPT1), mRNA
1727	14318	26861	8.55	4.0E-90	X69033.1	NT	H. sapiens gene encoding discoidin receptor tyrosine kinase, exon 18
3024	15640	28117	0.97	4.0E-90	AF007544.1	NT	Homo sapiens prostatic-specific membrane antigen (PSM) gene, complete cds
4761	17342	28790	3.77	4.0E-90	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
4915	17490	29944	2.2	4.0E-90	AB033070.1	NT	Homo sapiens mRNA for KIAA1244 protein, partial cds
4943	17518	29960	1.62	4.0E-90	M95987.1	NT	Human prohormone converting enzyme (NEC2) gene, exon 8
5096	17689		0.7	3.0E-90	AI370786.1	EST_HUMAN	qz89d08.x1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:2041743 3' similar to gb:M31470 RAS-LIKE PROTEIN TC10 (HUMAN);
7784	20337	33244	1.07	3.0E-90	BF516168.1	EST_HUMAN	UJ-H-BW1-any-b-04-0-UJ.s1 NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3083839 3'
7784	20337	33245	1.07	3.0E-90	BF516168.1	EST_HUMAN	UJ-H-BW1-any-b-04-0-UJ.s1 NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3083839 3'
11491	23940	37011	33.84	3.0E-90	BE563833.1	EST_HUMAN	601335244F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3689147 5'
230	12880	25376	4.32	2.0E-90	BE537913.1	EST_HUMAN	601067378F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3453834 5'
1215	13815	26329	16.29	2.0E-90	5031748	NT	Homo sapiens high-mobility group (nonhistone chromosomal) protein 17 (HMG17), mRNA
1215	13815	26330	16.29	2.0E-90	5031748	NT	Homo sapiens high-mobility group (nonhistone chromosomal) protein 17 (HMG17), mRNA
2420	14988		1.78	2.0E-90	4605052	NT	Homo sapiens lymphocyte antigen 75 (LY75) mRNA, and translated products
3912	16510	28972	2.37	2.0E-90	AI138213.1	EST_HUMAN	qc54c02.x1 Soares_placenta_8to9weeks_2NBHP869W Homo sapiens cDNA clone IMAGE:1713410 3' similar to SW:OLF3_MOUSE P23275 OLFACTORY RECEPTOR OR3.;
4798	17376	29827	1.16	2.0E-90	AB006627.1	NT	Homo sapiens mRNA for KIAA0289 gene, partial cds
5035	17609	30053	10.95	2.0E-90	5728855	NT	Homo sapiens GRB2-related adaptor protein (GRAP) mRNA
5948	18569	31300	0.72	2.0E-90	11525901	NT	Homo sapiens Rap2 interacting protein 8 (RPIP8), mRNA
5948	18569	31301	0.72	2.0E-90	11525901	NT	Homo sapiens Rap2 interacting protein 8 (RPIP8), mRNA
5955	18577	31311	4.78	2.0E-90	AW672686.1	EST_HUMAN	ba49d05.y3 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:2899881 5' similar to TR:O75208 O75208 HYPOTHETICAL 35.5 KD PROTEIN.;
9705	22204	35176	8.36	2.0E-90	11427320	NT	Homo sapiens similar to laminin receptor 1 (67KD, ribosomal protein SA) (H. sapiens) (LOC83484), mRNA
9705	22204	35177	8.36	2.0E-90	11427320	NT	Homo sapiens similar to laminin receptor 1 (67KD, ribosomal protein SA) (H. sapiens) (LOC83484), mRNA
9870	22367	35344	0.92	2.0E-90	AU118985.1	EST_HUMAN	AU118985 HEMBA1 Homo sapiens cDNA clone HEMBA1004795 5'
9870	22367	35345	0.92	2.0E-90	AU118985.1	EST_HUMAN	AU118985 HEMBA1 Homo sapiens cDNA clone HEMBA1004795 5'
11345	23043	36053	4.12	2.0E-90	11024711	NT	Homo sapiens myosin, heavy polypeptide 4, skeletal muscle (MYH4), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
298	12954	25443	3.2	1.0E-90	4502168	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
397	15396	25533	2.02	1.0E-90	AF231920.1	NT	Homo sapiens chromosome 21 unknown mRNA
398	15398	25533	1.38	1.0E-90	AF231920.1	NT	Homo sapiens chromosome 21 unknown mRNA
724	13344	25835	1.49	1.0E-90	AJ237589.1	NT	Homo sapiens mRNA for T-box transcription factor (TBX20 gene), partial
724	13344	25836	1.49	1.0E-90	AJ237589.1	NT	Homo sapiens mRNA for T-box transcription factor (TBX20 gene), partial
759	13378	25874	13.32	1.0E-90	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
759	13378	25875	13.32	1.0E-90	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
1149	13752		3.05	1.0E-90	4507828	NT	Homo sapiens Kruppel-like factor 7 (ubiquitous) (KLIF7), mRNA
1349	13944	26467	2.46	1.0E-90	AF096154.1	NT	Homo sapiens protein phosphatase 2A BR gamma subunit gene, exon 3
1349	13944	26468	2.46	1.0E-90	AF096154.1	NT	Homo sapiens protein phosphatase 2A BR gamma subunit gene, exon 3
1707	14300		1.38	1.0E-90	BE378884.1	EST_HUMAN	60115953F2 NIH_MGC_53 Homo sapiens cDNA clone IMAGE.351118 5'
1946	14530	27086	2.82	1.0E-90	11420514	NT	Homo sapiens similar to SALL1 (sal (Drosophila)-like (LOC57167), mRNA
2878	15486	27867	7.6	1.0E-90	6003720	NT	Homo sapiens chromosome 8 open reading frame 2 (C8ORF2), mRNA
3918	16516	28980	0.98	1.0E-90	AB020710.1	NT	Homo sapiens mRNA for KIAA0903 protein, partial cds
3918	16516	28981	0.98	1.0E-90	AB020710.1	NT	Homo sapiens mRNA for KIAA0903 protein, partial cds
4514	17098	29545	1.64	1.0E-90	AF167340.1	NT	Homo sapiens soluble interleukin 1 receptor accessory protein (IL1RAP) gene, exon 8, alternative exons 9 and complete cds, alternatively spliced
5855	18478	31201	1.98	1.0E-90	AB014533.1	NT	Homo sapiens mRNA for KIAA0633 protein, partial cds
6002	18622	31357	0.95	1.0E-90	11426910	NT	Homo sapiens KIAA0623 gene product (KIAA0623), mRNA
7133	19473	32293	0.68	1.0E-90	U91934.1	NT	Human retina-derived POU-domain factor-1 mRNA, complete cds
7665	20177	33084	2.52	1.0E-90		NT	Homo sapiens solute carrier family 1 (high affinity aspartate/glutamate transporter), member 6 (SLC1A6), mRNA
8755	21294	34214	4.17	1.0E-90	11422080	NT	Homo sapiens brefeldin A-inhibited guanine nucleotide-exchange protein 2 (BIG2), mRNA
9217	21794		0.97	1.0E-90	AF163864.1	NT	Homo sapiens SNCA isoform (SNCA) gene, complete cds, alternatively spliced
9239	21795	34712	1.33	1.0E-90	11422109	NT	Homo sapiens CGI-15 protein (LOC51006), mRNA
9239	21795	34713	1.33	1.0E-90	11422109	NT	Homo sapiens CGI-15 protein (LOC51006), mRNA
4274	16860	29309	6.54	8.0E-91	D12234.1	EST_HUMAN	HUM000S381 Liver HepG2 cell line. Homo sapiens cDNA clone s381 3'
8248	20789	33708	2.74	7.0E-91	11419234	NT	Homo sapiens makorin, ring finger protein, 1 (MKRN1), mRNA
10201	22696	35690	0.74	7.0E-91	A1904151.1	EST_HUMAN	GM-BT043-080299-075 BT043 Homo sapiens cDNA
3521	16126	28606	1.52	5.0E-91	AA702794.1	EST_HUMAN	z190504.s1 Soares fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE.448015 3'
4614	17197	29643	1.21	5.0E-91	AU143539.1	EST_HUMAN	AU143539 Y79AA1 Homo sapiens cDNA clone Y79AA1002087 5'
4614	17197	29644	1.21	5.0E-91	AU143539.1	EST_HUMAN	AU143539 Y79AA1 Homo sapiens cDNA clone Y79AA1002087 5'
4931	17506	29952	0.66	5.0E-91	7110634	NT	Homo sapiens chromosome 22 open reading frame 5 (C22ORF5), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4931	17506	29953	0.66	5.0E-91	7110634	NT	Homo sapiens chromosome 22 open reading frame 5 (C22ORF5), mRNA
6729	18323	32128	1.06	5.0E-91	A1878995.1	EST_HUMAN	eu49709.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2518121 3' similar to SW:ASPG_FLAME Q47898 N4-(BETA-N-ACETYLGLUCOSAMINYL)-L-ASPARAGINASE PRECURSOR ;
8147	20688	33601	1.52	5.0E-91	BF514882.1	EST_HUMAN	601801624F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4130933 5'
8695	21234	34155	1.4	5.0E-91	AV649878.1	EST_HUMAN	AV649878 GLC Homo sapiens cDNA clone GLCBYF08 3'
8695	21234	34156	1.4	5.0E-91	AV649878.1	EST_HUMAN	AV649878 GLC Homo sapiens cDNA clone GLCBYF08 3'
12443	24579		1.76	5.0E-91	A1193596.1	EST_HUMAN	q97011.1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1744365 3' similar to contains MIR.b2 MIR MIR repetitive element ;
3236	15848	28328	1.25	4.0E-91	AF156776.1	NT	Homo sapiens lysophosphatidic acid acyltransferase-delta (LPAA1T-delta) mRNA, complete cds
3236	15848	28329	1.25	4.0E-91	AF156776.1	NT	Homo sapiens lysophosphatidic acid acyltransferase-delta (LPAA1T-delta) mRNA, complete cds
10810	23333	36346	3.98	4.0E-91	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
11882	24229	31001	3.09	4.0E-91	M77994.1	EST_HUMAN	EST01579 Hippocampus, Stragene (cat. #936205) Homo sapiens cDNA clone HHCNC60 similar to Retrovirus-related gag polyprotein
11882	24229	31047	3.09	4.0E-91	M77994.1	EST_HUMAN	EST01579 Hippocampus, Stragene (cat. #936205) Homo sapiens cDNA clone HHCNC60 similar to Retrovirus-related gag polyprotein
12181	24417	30847	1.36	4.0E-91	M77994.1	EST_HUMAN	EST01579 Hippocampus, Stragene (cat. #936205) Homo sapiens cDNA clone HHCNC60 similar to Retrovirus-related gag polyprotein
12181	24417	30848	1.36	4.0E-91	M77994.1	EST_HUMAN	EST01579 Hippocampus, Stragene (cat. #936205) Homo sapiens cDNA clone HHCNC60 similar to Retrovirus-related gag polyprotein
1660	14253	26787	4.64	3.0E-91	11430183	NT	Homo sapiens solute carrier family 4, anion exchanger, member 3 (SLC4A3), mRNA
1660	14253	26788	4.64	3.0E-91	11430183	NT	Homo sapiens solute carrier family 4, anion exchanger, member 3 (SLC4A3), mRNA
3383	15992	28470	1.4	3.0E-91	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
3509	16114	28592	3.17	3.0E-91	AB033104.1	NT	Homo sapiens mRNA for KIAA1278 protein, partial cds
3509	16114	28593	3.17	3.0E-91	AB033104.1	NT	Homo sapiens mRNA for KIAA1278 protein, partial cds
3896	16454	28918	1.2	3.0E-91	AF084530.1	NT	Homo sapiens cyclin-D binding Myb-like protein mRNA, complete cds
4693	17275	29722	4.36	3.0E-91	M30938.1	NT	Human Ku (p70/p80) subunit mRNA, complete cds
5115	17887	30124	1.19	3.0E-91	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
5115	17887	30125	1.19	3.0E-91	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
5865	18487	31211	1.5	3.0E-91	11434964	NT	Homo sapiens epididymal secretory protein (19.5kD) (HE1), mRNA
6446	18048		2.85	3.0E-91	4502740	NT	Homo sapiens cyclin-dependent kinase 6 (CDK6) mRNA
6697	19293	32097	4.48	3.0E-91	11497611	NT	Homo sapiens gamma-aminobutyric acid (GABA) B receptor, 1 (GABBR1), transcript variant 2, mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6697	19293	32098	4.48	3.0E-91	11497611	NT	Homo sapiens gamma-aminobutyric acid (GABA) B receptor, 1 (GABBR1), transcript variant 2, mRNA
7634	20146	33028	4.04	3.0E-91	U96959.1	NT	Human L-type calcium channel beta-1 subunit (CACNLB1) gene, exons 10 and 11
7634	20146	33029	4.04	3.0E-91	U96959.1	NT	Human L-type calcium channel beta-1 subunit (CACNLB1) gene, exons 10 and 11
7887	20429	33338	0.46	3.0E-91	6601589	NT	Homo sapiens ankyrin-like with transmembrane domains 1 (ANKTM1), mRNA
8706	21245	34188	2.6	3.0E-91	D18494.1	NT	Human mRNA for very low density lipoprotein receptor, complete cds
9212	21729	34672	0.8	3.0E-91	AB011166.1	NT	Homo sapiens mRNA for KIA0594 protein, partial cds
12504	18025	30406	9.31	3.0E-91	AF169555.1	NT	Homo sapiens beta-ureidopropionase (BUP1) gene, exon 6
12504	18025	30407	9.31	3.0E-91	AF169555.1	NT	Homo sapiens beta-ureidopropionase (BUP1) gene, exon 6
52	12732	25199	2.37	1.0E-91	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
1288	13883	26408	6.6	1.0E-91	AW449746.1	EST_HUMAN	UI-H-B13-aks-d01-Q-UI.s1 NCI_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:2735280 3'
5608	18237	30687	0.84	1.0E-91	11434402	NT	Homo sapiens hypothetical protein PRO1855 (PRO1855), mRNA
6930	19589	32419	1.76	1.0E-91	BF348182.1	EST_HUMAN	602022088F1 NCI_CGAP_Brn87 Homo sapiens cDNA clone IMAGE:4157804 5'
6930	19589	32420	1.76	1.0E-91	BF348182.1	EST_HUMAN	602022088F1 NCI_CGAP_Brn87 Homo sapiens cDNA clone IMAGE:4157804 5'
1284	13880	26402	9.55	9.0E-92	AJ001689.1	NT	Homo sapiens NKG2D gene, exon 10
1284	13880	26403	9.55	9.0E-92	AJ001689.1	NT	Homo sapiens NKG2D gene, exon 10
5389	17947	30359	0.59	9.0E-92	AB020640.1	NT	Homo sapiens mRNA for KIAA0833 protein, partial cds
5654	18281	30760	4.15	9.0E-92	J03007.1	NT	Human Na <sup>+</sup> K <sup>+</sup> ATPase alpha-subunit mRNA, partial cds
5790	18415	31131	2.53	9.0E-92	11427149	NT	Homo sapiens hypothetical protein FLJ20260 (FLJ20260), mRNA
6581	19179	31979	4	9.0E-92	AF310105.1	NT	Homo sapiens NALP1 mRNA, complete cds
7798	20341	33249	0.75	9.0E-92	AJ250566.1	NT	Homo sapiens partial TMAS2F2 gene for tetraspanin protein, exon 5
7798	20341	33250	0.75	9.0E-92	AJ250566.1	NT	Homo sapiens partial TMAS2F2 gene for tetraspanin protein, exon 5
8315	20856	33781	1.11	9.0E-92	AB040945.1	NT	Homo sapiens mRNA for KIAA1512 protein, partial cds
8315	20856	33782	1.11	9.0E-92	AB040945.1	NT	Homo sapiens mRNA for KIAA1512 protein, partial cds
9198	21715	34659	1.84	9.0E-92	11422086	NT	Homo sapiens brefeldin A-inhibited guanine nucleotide-exchange protein 2 (BIG2), mRNA
98	12772	25254	11	8.0E-92	W26367.1	EST_HUMAN	28f3 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
307	12962	25451	6.03	8.0E-92	BE386363.1	EST_HUMAN	601273513F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3614667 5'
1860	14448	27005	1.03	8.0E-92	11434722	NT	Homo sapiens diacylglycerol kinase, gamma (90kD) (DGKG), mRNA
1860	14448	27006	1.03	8.0E-92	11434722	NT	Homo sapiens diacylglycerol kinase, gamma (90kD) (DGKG), mRNA
							om13e02.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1540922 3' similar to contains
4306	16892	29335	0.98	8.0E-92	AA909157.1	EST_HUMAN	L1.b2 L1 repetitive element
5265	17627	30251	2.02	8.0E-92	AW157571.1	EST_HUMAN	au83h08.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782911 3' similar to
5591	18222	30671	0.76	8.0E-92	AB046820.1	NT	TR:O60302 O60302 KIAA0555 PROTEIN, contains element MER22 repetitive element
							Homo sapiens mRNA for KIAA1600 protein, partial cds

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5690	18316	30815	0.96	8.0E-92	AF264717.1	NT	Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-DSP2 mRNA, complete cds
6666	19262	32069	1.25	8.0E-92	AJ000979.1	NT	Homo sapiens MCP-4 gene
6669	19265	32069	0.72	8.0E-92	AF179428.1	NT	Homo sapiens DNA polymerase zeta catalytic subunit variant 1 (REV3L) mRNA, complete cds
7747	20255	33149	5.06	8.0E-92	X89536.1	NT	H. sapiens gene for inter-alpha-typsin inhibitor heavy chain H1, exons 7-8
7747	20255	33150	5.06	8.0E-92	X89536.1	NT	H. sapiens gene for inter-alpha-typsin inhibitor heavy chain H1, exons 7-8
8035	20577		0.68	8.0E-92	11416961	NT	Homo sapiens AIM-1 protein (LOC51151), mRNA
8364	20904	33822	4.96	8.0E-92	L04193.1	NT	Human lens membrane protein (mp19) gene, exon 11
8364	20904	33823	4.96	8.0E-92	L04193.1	NT	Human lens membrane protein (mp19) gene, exon 11
8461	21001	33918	0.67	8.0E-92	11428569	NT	Homo sapiens transcription termination factor, RNA polymerase II (TTF2), mRNA
8992	21530	34459	2.47	8.0E-92	AB014511.1	NT	Homo sapiens mRNA for KIAA0611 protein, partial cds
9939	22434	35410	1.76	8.0E-92	Y13829.1	NT	Homo sapiens mRNA for MBNL protein
10683	23214	36226	5.17	8.0E-92	AF074393.1	NT	Homo sapiens nuclear, mitogen- and stress-activated protein kinase-1 (MSK1) mRNA, complete cds
11239	23770	36828	2.58	8.0E-92	4503340	NT	Homo sapiens dihydrolipoamide S-succinyltransferase (E2 component of 2-oxo-glutarate complex) (DLST), mRNA
257	15411	25402	1.61	7.0E-92	AB018301.1	NT	Homo sapiens mRNA for KIAA0758 protein, partial cds
257	15411	25403	1.61	7.0E-92	AB018301.1	NT	Homo sapiens mRNA for KIAA0758 protein, partial cds
617	13244		1.09	7.0E-92	AF007822.1	NT	Homo sapiens cytoplasmic Seprase truncated isoform mRNA, complete cds
1323	13917	26439	3.02	7.0E-92	4502384	NT	Homo sapiens B-cell CLL/lymphoma 7b (BCL7B) mRNA
2229	14804	27375	1.25	7.0E-92	5031570	NT	Homo sapiens ARP2 (actin-related protein 2, yeast) homolog (ACTR2), mRNA
2229	14804	27376	1.25	7.0E-92	5031570	NT	Homo sapiens ARP2 (actin-related protein 2, yeast) homolog (ACTR2), mRNA
2599	15161	27729	1.45	7.0E-92	AF167706.1	NT	Homo sapiens cysteine-rich repeat-containing protein S52 precursor, mRNA, complete cds
2751	15306	27870	2.14	7.0E-92	6005738	NT	Homo sapiens NRAS-related gene (D1S155E), mRNA
2781	15334	27904	1.03	7.0E-92	AB031007.1	NT	Homo sapiens DNA, MHC class I region, 7.1 ancestral haplotype
3389	18003	28474	0.65	7.0E-92	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
3389	18003	28475	0.65	7.0E-92	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
4687	17269	29718	1.08	7.0E-92	S71824.1	NT	N-CAM=145 kda neural cell adhesion molecule [human, small cell lung cancer cell line OS2-R, mRNA, 2860 nt]
4687	17269	29719	1.08	7.0E-92	S71824.1	NT	N-CAM=145 kda neural cell adhesion molecule [human, small cell lung cancer cell line OS2-R, mRNA, 2860 nt]
5147	17717	30148	1.15	7.0E-92	AL163261.2	NT	Homo sapiens chromosome 21 segment HS21C081
5350	17910	30325	1.12	7.0E-92	4508118	NT	Homo sapiens prospero-related homeobox 1 (PROX1) mRNA
5466	18101	30419	4.93	7.0E-92	AA446206.1	EST_HUMAN	zw66d12.1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:781175 5'

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1631	14223		1.18	5.0E-02	BE390882.1	EST_HUMAN	601283012F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3605018 5'
2793	15346	27915	2.12	3.0E-02	BE909714.1	EST_HUMAN	601501242F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3902939 5'
6036	18655	31397	7.84	3.0E-02	AA378336.1	EST_HUMAN	EST191020 Synovial sarcoma Homo sapiens cDNA 5' end similar to ribosomal protein S13
10645	23177	36189	2.86	3.0E-02	X15804.1	NT	Human mRNA for alpha-actinin
10645	23177	36190	2.86	3.0E-02	X15804.1	NT	Human mRNA for alpha-actinin
12358	25103		1.76	3.0E-02	BF367138.1	EST_HUMAN	RC1-GN0021-240800-012-e11 GN0021 Homo sapiens cDNA
28	12707	25164	1.57	2.0E-02	4501898	NT	Homo sapiens actinin A receptor, type IIB (ACVR2B) mRNA
153	12816	25304	29.78	2.0E-02	AF154830.1	NT	Homo sapiens carbamyl phosphate synthetase L mRNA, complete cds
191	12851	25334	3.47	2.0E-02	11422948	NT	Homo sapiens hypothetical protein DJ462023.2 (DJ462023.2), mRNA
191	12851	25335	3.47	2.0E-02	11422946	NT	Homo sapiens hypothetical protein DJ462023.2 (DJ462023.2), mRNA
779	13398	25900	12.47	2.0E-02	BE289190.1	EST_HUMAN	601118337F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3028304 5'
779	13398	25901	12.47	2.0E-02	BE289190.1	EST_HUMAN	601118337F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3028304 5'
1752	14342		1.42	2.0E-02	S78653.1	NT	mtg-mas-related [Human, Genomic, 2416 nt]
1980	14563	27122	4.27	2.0E-02	A1818119.1	EST_HUMAN	wk27d07.x1 NCI CGAP Bm25 Homo sapiens cDNA clone IMAGE:2413549 3' similar to TR:Q12844
1980	14563	27123	4.27	2.0E-02	A1818119.1	EST_HUMAN	Q12844 BREAKPOINT CLUSTER REGION PROTEIN
2092	14672	27242	4.82	2.0E-02	4506880	NT	wk27d07.x1 NCI CGAP Bm25 Homo sapiens cDNA clone IMAGE:2413549 3' similar to TR:Q12844
2683	15241	27809	21.03	2.0E-02	6912457	NT	Q12844 BREAKPOINT CLUSTER REGION PROTEIN
2657	14287	26823	1.16	2.0E-02	11418424	NT	Homo sapiens syndecan 4 (amphiglycan, ryudocan) (SDC4) mRNA
2657	14287	26824	1.16	2.0E-02	11418424	NT	Homo sapiens calcitriol binding protein 1 (KIAA0330), mRNA
3673	16274	28740	1.13	2.0E-02	AF231919.1	NT	Homo sapiens collagen, type XII, alpha 1 (COL12A1), mRNA
3673	16274	28741	1.13	2.0E-02	AF231919.1	NT	Homo sapiens collagen, type XII, alpha 1 (COL12A1), mRNA
3673	16274	28741	1.13	2.0E-02	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
3673	16274	28741	1.13	2.0E-02	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
3749	16350	28818	6.13	2.0E-02	5803180	NT	Homo sapiens stress-induced-phosphoprotein 1 (Hsp70/Hsp90-organizing protein) (STIP1), mRNA
4376	16963	29409	1.46	2.0E-02	M10976.1	NT	Human endogenous retroviral DNA (4-1), complete retroviral segment
4868	17444	29895	0.75	2.0E-02	AF136523.1	NT	Homo sapiens bile salt export pump (BSEP) mRNA, complete cds
5133	17705		4.94	2.0E-02	AL040437.1	EST_HUMAN	DKFZp434C0414_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434C0414 5'
6444	19046		0.68	2.0E-02	4504756	NT	Homo sapiens integrin, alpha L (antigen CD11A (p180), lymphocyte function-associated antigen 1, alpha polypeptide) (ITGAL) mRNA
6727	19321	32126	2.75	2.0E-02	AB028991.1	NT	Homo sapiens mRNA for KIAA1068 protein, partial cds
7499	20005		0.75	2.0E-02	U67780.1	NT	Human NPY Y1-like receptor pseudogene mRNA, complete cds
8789	21328	34253	1.78	2.0E-02	AW340174.1	EST_HUMAN	hd02h02.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2908371 3' similar to TR:O02711

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10639	23171	36182	6.96	2.0E-92	11434800	NT	Homo sapiens thyroid stimulating hormone receptor (TSHR), mRNA
10926	23444	36465	1.92	2.0E-92	5803103	NT	Homo sapiens male-specific lthal-3 (Drosophila)-like 1 (MSL3L1), mRNA
11022	23536	36571	1.64	2.0E-92	AW836290.1	EST_HUMAN	CM4-LT0026-161298-062-g06 L T0026 Homo sapiens cDNA
11022	23536	36572	1.64	2.0E-92	AW836290.1	EST_HUMAN	CM4-LT0026-161298-062-g06 L T0026 Homo sapiens cDNA
12248	24459	30960	2.99	2.0E-92	AB029018.1	NT	Homo sapiens mRNA for KIAA1093 protein, partial cds
12533	15241	27809	96.37	2.0E-92	6912457	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
1890	14475	27034	1.6	1.0E-92	R78078.1	EST_HUMAN	y80e08.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:145574 5'
1890	14475	27035	1.6	1.0E-92	R78078.1	EST_HUMAN	y80e08.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:145574 5'
2118	14696	27265	10.49	1.0E-92	4509688	NT	Homo sapiens ribosomal protein, large, P1 (RPLP1) mRNA
8189	20730	33642	1.01	1.0E-92	BE439625.1	EST_HUMAN	HTM1-288F HTM1 Homo sapiens cDNA
9091	21627	34563	4.16	1.0E-92	A1390356.1	EST_HUMAN	tg01b02.x1 NCI CGAP_CLL1 Homo sapiens cDNA clone IMAGE:2107487 3' similar to SW:PTNF_HUMAN Q16825 PROTEIN-TYROSINE PHOSPHATASE D1 ;contains Alu repetitive element;contains element MER17 repetitive element ;
9091	21627	34564	4.16	1.0E-92	A1390356.1	EST_HUMAN	tg01b02.x1 NCI CGAP_CLL1 Homo sapiens cDNA clone IMAGE:2107487 3' similar to SW:PTNF_HUMAN Q16825 PROTEIN-TYROSINE PHOSPHATASE D1 ;contains Alu repetitive element;contains element MER17 repetitive element ;
2078	14656	27226	3.52	9.0E-93	AU121681.1	EST_HUMAN	AU121681 MAMMA1 Homo sapiens cDNA clone MAMMA1000738 5'
2086	14687		10.76	9.0E-93	AA316723.1	EST_HUMAN	EST188414 HCC cell line (metastasis to liver in mouse) II Homo sapiens cDNA 5' end similar to ribosomal protein L29
2673	15231		1.18	9.0E-93	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
3674	16275	26742	1.02	9.0E-93	BE388571.1	EST_HUMAN	601281867F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3603832 5'
11501	23950		18.44	9.0E-93	11418526	NT	Homo sapiens ribosomal protein L10a (RPL10A), mRNA
8705	19300	32104	4.23	8.0E-93	BF036364.1	EST_HUMAN	601460521F1 NIH_MGC_86 Homo sapiens cDNA clone IMAGE:3663908 5'
267	12924	25410	8.56	7.0E-93	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
3111	15726	28197	0.59	6.0E-93	11526176	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1), mRNA
6782	19373	32189	1.17	6.0E-93	AB033093.1	NT	Homo sapiens mRNA for KIAA1287 protein, partial cds
6996	19494	32315	1.37	6.0E-93	AF095771.1	NT	Homo sapiens PTH-responsive osteocalcinoma B1 protein (B1) mRNA, complete cds
1423	14016	28545	1.92	5.0E-93	AB014511.1	NT	Homo sapiens mRNA for KIAA0611 protein, partial cds
1453	14045	26574	6.35	5.0E-93	A1674184.1	EST_HUMAN	wc09c08.x1 NCI CGAP_Pt28 Homo sapiens cDNA clone IMAGE:2314670 3'
1453	14045	26575	6.35	5.0E-93	A1674184.1	EST_HUMAN	wc09c08.x1 NCI CGAP_Pt28 Homo sapiens cDNA clone IMAGE:2314670 3'
1523	14115		0.97	5.0E-93	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
1862	15452	27008	0.9	5.0E-93	AJ297710.1	NT	Homo sapiens mRNA for CDC2L5 protein kinase, (CDC2L5 gene), isoform 2
3270	15892	28384	2.6	5.0E-93	X04201.1	NT	Human skeletal muscle 1.3 kb mRNA for tropomyosin

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5967	18588	31323	0.93	5.0E-93	M22878.1	NT	Human somatic cytochrome c (HC1) processed pseudogene, complete cds
6257	18866		1.49	5.0E-93	AF045555.1	NT	Homo sapiens wbscr1 (WBSCR1) and wbscr5 (WBSCR5) genes, complete cds, alternatively spliced and replication factor C subunit 2 (RFC2) gene, complete cds
7700	20209	33096	3.68	5.0E-93	AF067136.1	NT	Homo sapiens protein phosphatase-1 regulatory subunit 7 (PPP1R7) gene, exon 11, complete cds and alternatively spliced product
8541	21080	34000	0.68	5.0E-93	4557526	NT	Homo sapiens discs, large (Drosophila) homolog 2 (chapsyn-110) (DLG2) mRNA
8541	21080	34001	0.68	5.0E-93	4557528	NT	Homo sapiens discs, large (Drosophila) homolog 2 (chapsyn-110) (DLG2) mRNA
9541	22041	35002	2.26	5.0E-93	AF274863.1	NT	Homo sapiens secretory pathway component Sec31B-1 mRNA, alternatively spliced, complete cds
9721	22219	35194	2.87	5.0E-93	5032156	NT	Homo sapiens TAR (HIV) RNA-binding protein 1 (TARBP1) mRNA
9982	22477	35459	1.58	5.0E-93	AF069313.2	NT	Homo sapiens WSB1 protein (WSB1) mRNA, complete cds
10705	23234	36247	2.14	5.0E-93	11439599	NT	Homo sapiens nucleobindin 2 (NUCB2), mRNA
12145	24731	30856	2.11	5.0E-93	11417877	NT	Homo sapiens gamma-glutamyltransferase 1 (GGT1), mRNA
91	12767		6.55	4.0E-93	AA459933.1	EST_HUMAN	z50e09 st Soares, testis NHT Homo sapiens cDNA clone IMAGE:795688 3' similar to SW:CLPA_RAT
470	13103	25595	1.56	4.0E-93	4557879	NT	P37397 CALPONIN, ACIDIC ISOFORM ;
470	13103	25598	1.58	4.0E-93	4557879	NT	Homo sapiens interferon gamma receptor 1 (IFNGR1) mRNA
804	13421	25926	2.39	4.0E-93	7657454	NT	Homo sapiens interferon gamma receptor 1 (IFNGR1) mRNA
804	13421	25927	2.39	4.0E-93	7657454	NT	Homo sapiens pscadillo (zabrafish) homolog 1, containing BRCT domain (PES1), mRNA
1225	13824	26339	1.5	4.0E-93	8923658	NT	Homo sapiens pscadillo (zabrafish) homolog 1, containing BRCT domain (PES1), mRNA
2020	14602	27167	5.25	4.0E-93	AF047877.1	NT	Homo sapiens hypothetical protein FLJ20731 (FLJ20731), mRNA
2638	15197	27771	1.41	4.0E-93	7656972	NT	Homo sapiens dystrophin (DMD) gene, deletion breakpoints 1-3 in intron 5
3624	16227	28705	0.8	4.0E-93	7705396	NT	Homo sapiens TNF-inducible protein CG12-1 (CG12-1), mRNA
4122	16715	28171	2.14	4.0E-93	4504854	NT	Homo sapiens tumor antigen SLP-8p (HCC8), mRNA
5171	16227	28705	0.86	4.0E-93	7705396	NT	Homo sapiens tumor antigen SLP-8p (HCC8), mRNA
5825	18449	31172	5.27	4.0E-93	T48864.1	EST_HUMAN	y694c12.r1 Strategene liver (H937224) Homo sapiens cDNA clone IMAGE:78838 5' similar to similar to SP:A44391 A44391 SERUM RESPONSE ELEMENT-BINDING PROTEIN SRE-ZBP - HUMAN ,
11013	23527	38563	14.54	4.0E-93	AV692051.1	EST_HUMAN	AV692051 GK Homo sapiens cDNA clone GKCDRF07 5'
3713	16314	28781	8.68	3.0E-93	BF690630.1	EST_HUMAN	602246554F1 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:4332036 5'
3713	16314	28782	8.68	3.0E-93	BF690630.1	EST_HUMAN	602246554F1 NIH_MGC_92 Homo sapiens cDNA clone IMAGE:4332036 5'
4319	16905		5.51	3.0E-93	AF225896.1	NT	Homo sapiens tensin mRNA, complete cds
6679	19275	32079	1.28	3.0E-93	11426182	NT	Homo sapiens GCN5 (general control of amino-acid synthesis, yeast, homolog)-like 2 (GCN5L2), mRNA



Table 4

## Single Exon Probes Expressed in Fetal Liver

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10690	23212	36223	4.85	3.0E-93	AB24828.1	EST_HUMAN	wb02d05.x1 NCI CGAP GC6 Homo sapiens cDNA clone IMAGE:2304489 3'
204	12865	25349	26.58	2.0E-93	AB015610.1	NT	Chlorococcus aethiops mRNA for ribosomal protein S4X, complete cds
204	12865	25350	26.58	2.0E-93	AB015610.1	NT	Chlorococcus aethiops mRNA for ribosomal protein S4X, complete cds
345	12897	25483	10.26	2.0E-93	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
346	12897	25483	6.69	2.0E-93	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
1857	14250	26784	7.56	2.0E-93	AF225896.1	NT	Homo sapiens tansin mRNA, complete cds
2527	15081	27684	1.01	2.0E-93	BE252882.1	EST_HUMAN	601177686F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3358220 5'
5611	18240	30689	6.13	2.0E-93	AW964365.1	EST_HUMAN	EST376458 IMAGE sequences; MAGH Homo sapiens cDNA
5818	18442	31164	1.06	2.0E-93	11430039	NT	Homo sapiens hypothetical protein (LOC51318), mRNA
5832	18456	31177	0.76	2.0E-93	U74313.1	EST_HUMAN	HSU74313 Human chromosome 14 Homo sapiens cDNA clone 1-88
6785	19376		1.21	2.0E-93	AW502002.1	EST_HUMAN	UI-HF-BND-aks-g-09-0-UI.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078329 5'
12032	24322		2.49	2.0E-93	AA128735.1	EST_HUMAN	z28c10.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:503346 3'
12119	24378		2.81	2.0E-93	L41825.1	NT	Homo sapiens CYP17 gene, 5' end
12404	24582		5.66	2.0E-93	BF035327.1	EST_HUMAN	60145853F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3882086 5'
107	12783	25265	33.31	1.0E-93	AF238997.1	NT	Homo sapiens CTR1 pseudogene
107	12783	25266	33.31	1.0E-93	AF238997.1	NT	Homo sapiens CTR1 pseudogene
544	13175	25655	7.63	1.0E-93	7657018	NT	Homo sapiens hypothetical protein (DJ328E19.C1.1), mRNA
826	13253	25727	3.51	1.0E-93	AI146755.1	EST_HUMAN	cy84b08.x1 NCI CGAP CLL1 Homo sapiens cDNA clone IMAGE:1672503 3' similar to TR:Q62384 Q62384
805	13519	26037	5.19	1.0E-93	D87675.1	NT	ZINC FINGER PROTEIN, ;
1280	13875	26395	6.4	1.0E-93	8923270	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
1280	13875	26396	6.4	1.0E-93	8923270	NT	Homo sapiens hypothetical protein FLJ20291 (FLJ20291), mRNA
1389	13983	26509	1.09	1.0E-93	AB046783.1	NT	Homo sapiens hypothetical protein FLJ20291 (FLJ20291), mRNA
2375	14945	27518	1.57	1.0E-93	AF231981.1	NT	Homo sapiens mRNA for KIAA1563 protein, partial cds
2503	15087	27641	2.67	1.0E-93	AF055066.1	NT	Homo sapiens long chain polyunsaturated fatty acid elongation enzyme (HELO1) mRNA, complete cds
2849	13933	26453	1.93	1.0E-93	BE297369.1	EST_HUMAN	Homo sapiens MHC class 1 region
2849	13933	26454	1.93	1.0E-93	BE297369.1	EST_HUMAN	601177686F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3632965 5'
2960	15579	28055	1.99	1.0E-93	D87675.1	NT	601177686F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3632965 5'
						NT	Homo sapiens DNA for amyloid precursor protein, complete cds
3282	15884		1.51	1.0E-93	AF231981.1	NT	Homo sapiens long chain polyunsaturated fatty acid elongation enzyme (HELO1) mRNA, complete cds
4520	17104	29550	1.82	1.0E-93	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
5755	18381	31092	1.36	1.0E-93	U78509.1	NT	Homo sapiens glucocorticoid receptor (GRL) gene, intron D, exon 5, and intron E
5755	18381	31093	1.38	1.0E-93	U78509.1	NT	Homo sapiens glucocorticoid receptor (GRL) gene, intron D, exon 5, and intron E

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5838	18559	31288	0.99	1.0E-93	AF227138.1	NT	Homo sapiens candidate taste receptor T2R14 gene, complete cds
6074	18691	31437	9.26	1.0E-93	4557792	NT	Homo sapiens neurofibromin 1 (neurofibromatosis, von Recklinghausen disease, Watson disease) (NF1) mRNA
6344	18950	31728	1.02	1.0E-93	7662241	NT	Homo sapiens KIAA0872 gene product (KIAA0872), mRNA
6886	19621	32455	2.16	1.0E-93	11431580	NT	Homo sapiens protein kinase C, beta 1 (PRKCB1), mRNA
7297	19825	32684	5.6	1.0E-93	D42072.1	NT	Human mRNA for NF1 N-isoform-exon11, complete cds
8203	20744	33657	2.4	1.0E-93	AB037832.1	NT	Homo sapiens mRNA for KIAA1411 protein, partial cds
8480	21019	33934	1.1	1.0E-93	Y10183.1	NT	H sapiens mRNA for MEMD protein
8983	21122	34042	1.26	1.0E-93	AF182032.1	NT	Homo sapiens protein kinase inhibitor gamma (PKIG) mRNA, complete cds
9373	20312	33214	1.64	1.0E-93	AB040918.1	NT	Homo sapiens mRNA for KIAA1485 protein, partial cds
9377	20318	33218	1.26	1.0E-93	AF091395.1	NT	Homo sapiens Trio isoform mRNA, complete cds
9507	22007	34963	4.34	1.0E-93	X13474.1	NT	Human PreA4 gene for Alzheimer's disease A4 amyloid protein precursor (exon 9)
9507	22007	34964	4.34	1.0E-93	X13474.1	NT	Human PreA4 gene for Alzheimer's disease A4 amyloid protein precursor (exon 9)
9641	22141	35108	0.59	1.0E-93	AL049801.1	NT	Novel human gene mapping to chromosome 13, similar to rat RhoGAP
10050	22545	35540	0.51	1.0E-93	11433646	NT	Homo sapiens ryanodine receptor 3 (RYR3), mRNA
11686	24822	30793	1.37	1.0E-93	AI268262.1	EST_HUMAN	q103c12.x1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1880758 3' similar to WP: T19B4.4
12301	24498		2.06	1.0E-93	AJ230125.1	NT	CE13742
12397	24557		5.43	1.0E-93	11417858	NT	Homo sapiens GGT1 gene, exon 1
12568	24667	30874	1.72	1.0E-93	11417862	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2), mRNA
12584	25080		2.21	1.0E-93	AF240786.1	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
10484	22978		1.17	8.0E-94	AL163209.2	NT	Homo sapiens glutathione S-transferase theta 1 (GSTT1) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
4034	16632	29101	2.19	6.0E-94	AF142482.1	NT	Homo sapiens chromosome 21 segment HS21C009
12524	24640		1.31	6.0E-94	11418351	NT	Homo sapiens transcription enhancer factor-5 mRNA, complete cds
5570	18201	30650	3.71	5.0E-94	AB014512.1	NT	Homo sapiens mitogen-activated protein kinase 12 (MAPK12), mRNA
5570	18201	30651	3.71	5.0E-94	AB014512.1	NT	Homo sapiens mRNA for KIAA0812 protein, partial cds
6199	18809	31578	6.6	5.0E-94	AA722434.1	EST_HUMAN	Homo sapiens mRNA for KIAA0812 protein, partial cds
7081	19653	32491	1.45	5.0E-94	AI015800.1	EST_HUMAN	Homo sapiens mRNA for KIAA0812 protein, partial cds
8573	21112	34031	0.78	5.0E-94	BF529115.1	EST_HUMAN	Homo sapiens mRNA for KIAA0812 protein, partial cds
10852	23373	36391	1.97	5.0E-94	11423962	NT	z887g05.s1 Soares fetal heart NBH19W Homo sapiens cDNA clone IMAGE:409594 3'
10852	23373	36392	1.97	5.0E-94	11423962	NT	o183d05.s1 Soares fetal heart NB2HF8_gw Homo sapiens cDNA clone IMAGE:1623369 3'
12010	25083	30517	4.36	5.0E-94	T89398.1	EST_HUMAN	602042163F1 NCI_CGAP_Brn87 Homo sapiens cDNA clone IMAGE:4180023 5'
1882	14488		9.28	4.0E-94	L05094.1	NT	Homo sapiens adenylyate kinase 2 (AK2), mRNA
							Homo sapiens adenylyate kinase 2 (AK2), mRNA
							yd88b04.s1 Soares fetal liver spleen 1N1FLS Homo sapiens cDNA clone IMAGE:116239 3'
							Homo sapiens ribosomal protein L27 mRNA, complete cds

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4827	17405	29859	3.19	4.0E-94	AI591312.1	EST_HUMAN	tw11f10.x1 NCL_CGAP_Bm52 Homo sapiens cDNA clone IMAGE:2259403 3' similar to TR:Q15285 Q15265 PROTEIN TYROSINE PHOSPHATASE ;
6594	19191	31895	2.35	4.0E-94	11440670	NT	Homo sapiens solute carrier family 22 (organic cation transporter), member 1-like (SLC22A1L), mRNA
6594	19181	31896	2.35	4.0E-94	11440670	NT	Homo sapiens solute carrier family 22 (organic cation transporter), member 1-like (SLC22A1L), mRNA
6982	19490		0.89	4.0E-94	L27386.1	NT	Homo sapiens huntingtin (HD) gene, exon 37
11328	23026	36035	1.6	4.0E-94	11545792	NT	Homo sapiens hypothetical protein FLJ12455 (FLJ12455), mRNA
11598	24041	37110	4	4.0E-94	4507822	NT	Homo sapiens UDP glycosyltransferase 2 family, polypeptide B11 (UGT2B11) mRNA
639	13262	25738	3.74	3.0E-94	AB022785.1	NT	Homo sapiens ASH2L gene, complete cds, similar to Drosophila ash2 gene
750	13370	25864	9.91	3.0E-94	4502508	NT	Homo sapiens complement component 5 (C5) mRNA
1776	14368	26910	1.19	3.0E-94	AF167706.1	NT	Homo sapiens cysteine-rich repeat-containing protein S52 precursor, mRNA, complete cds
1776	14368	26911	1.19	3.0E-94	AF167706.1	NT	Homo sapiens cysteine-rich repeat-containing protein S52 precursor, mRNA, complete cds
1809	14368	26944	5.11	3.0E-94	4557558	NT	Homo sapiens E1A binding protein p300 (EP300) mRNA
5861	19483	31207	4.01	3.0E-94	11498268	NT	Homo sapiens zinc finger protein 277 (ZNF277), mRNA
6288	18907	31678	1.07	3.0E-94	AB011536.1	NT	Homo sapiens mRNA for MEGF2, partial cds
6579	19177	31977	5.19	3.0E-94	11526228	NT	Homo sapiens chromosome 21 open reading frame 18 (C21ORF18), mRNA
8140	20681	33593	0.89	3.0E-94	AF152309.1	NT	Homo sapiens protocadherin alpha 13 (PCDH-alpha13) mRNA, complete cds
8523	21062	33984	3.81	3.0E-94	AB014579.1	NT	Homo sapiens mRNA for KIAA0879 protein, partial cds
9511	22011	34870	7.24	3.0E-94	AF087942.1	NT	Homo sapiens glycogenin-1L mRNA, complete cds
10979	23483	36523	1.64	3.0E-94	4757821	NT	Homo sapiens axonal transport of synaptic vesicles (ATSV) mRNA
11527	23975	37045	1.62	3.0E-94	U26711.1	NT	Human cbl-b truncated form 1 lacking leucine zipper mRNA, complete cds
9667	22166	35140	0.51	2.0E-94	AI910393.1	EST_HUMAN	wi30h11.x1 NCL_CGAP_Cot16 Homo sapiens cDNA clone IMAGE:2391813 3'
9667	22166	35141	0.51	2.0E-94	AI910393.1	EST_HUMAN	wi30h11.x1 NCL_CGAP_Cot16 Homo sapiens cDNA clone IMAGE:2391813 3'
160	12823	25311	2.34	1.0E-94	BE295714.1	EST_HUMAN	601175782F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3531038 5'
3125	15739	28207	1.98	1.0E-94	BE253433.1	EST_HUMAN	601111689F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3352559 5'
3125	15739	28208	1.98	1.0E-94	BE253433.1	EST_HUMAN	601111689F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3352559 5'
4450	17036	29480	1.14	1.0E-94	9506682	NT	Homo sapiens hypothetical protein (FLJ20746), mRNA
6223	18832	31608	1.21	1.0E-94	AE000269.1	NT	Escherichia coli K-12 MG1655 section 159 of 400 of the complete genome
6412	18015	31797	1.32	1.0E-94	AL040518.1	EST_HUMAN	DKFZp434G0314_r1_434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434G0314 5'
6421	18024	31808	0.79	1.0E-94	H08270.1	EST_HUMAN	y6702.r1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:45053 5'
8057	20599	33507	0.56	1.0E-94	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
8057	20599	33508	0.56	1.0E-94	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
9180	21757	34703	2.29	1.0E-94	11428710	NT	Homo sapiens paired box gene 5 (B-cell lineage specific activator protein) (PAX5), mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9702	22201	35173	1.8	1.0E-94	BE780478.1	EST_HUMAN	601468748F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3872099 5'
10945	23461	36483	3.48	1.0E-94	U65590.1	NT	Homo sapiens IL-1 receptor antagonist IL-1Ra (IL-1RN) gene, alternatively spliced forms, complete cds
11197	23702	36753	2.05	1.0E-94	A1272244.1	EST_HUMAN	ap22e02.x1 Schiller oligodendrogloma Homo sapiens cDNA clone IMAGE:1956122 3' similar to TR:Q62845
11592	24035	37104	2.28	1.0E-94	11418871	NT	Q62845 NEURAL CELL ADHESION PROTEIN BIG-2 PRECURSOR. ; Homo sapiens KIAA0194 gene product (KIAA0164), mRNA
12133	12823	25311	1.34	1.0E-94	BE295714.1	EST_HUMAN	601175762F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3531038 5'
1525	14117	26654	2.12	9.0E-95	AF027302.1	NT	Homo sapiens TNF-alpha stimulated ABC protein (ABC50) mRNA, complete cds
3191	15803	28275	1.15	9.0E-95	7682027	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
3191	15803	28276	1.15	9.0E-95	7682027	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
5601	18230	30679	1.59	9.0E-95	X82569.1	NT	M.musculus glyt1 gene (exons 1c and 2)
5601	18230	30680	1.59	9.0E-95	X82569.1	NT	M.musculus glyt1 gene (exons 1c and 2)
8194	20735	33845	1.89	9.0E-95	AF274753.1	NT	Homo sapiens progressive ankylosis-like protein (ANK) mRNA, complete cds
155	12818	25306	10.08	8.0E-95	AF154830.1	NT	Homo sapiens carbamyl phosphate synthetase I mRNA, complete cds
4634	17217	29669	1.92	8.0E-95	A1700998.1	EST_HUMAN	we09e04.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2340606 3' similar to gb:K00558 TUBULIN ALPHA-1 CHAIN (HUMAN);
4634	17217	29670	1.92	8.0E-95	A1700998.1	EST_HUMAN	we09e04.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2340606 3' similar to gb:K00558 TUBULIN ALPHA-1 CHAIN (HUMAN);
7028	19552	32389	0.7	8.0E-95	11419378	NT	Homo sapiens KIAA0193 gene product (KIAA0193), mRNA
7290	19818	32677	1.44	8.0E-95	11428529	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, non-ATPase, 11 (PSMD11), mRNA
7290	19818	32678	1.44	8.0E-95	11428529	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, non-ATPase, 11 (PSMD11), mRNA
8138	20870	33590	1.93	8.0E-95	AF032897.1	NT	Homo sapiens potassium channel subunit (HERG-3) mRNA, complete cds
9287	21887	34832	1.88	8.0E-95	11420944	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
9287	21887	34833	1.88	8.0E-95	11420944	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
9792	22260	35243	3.42	8.0E-95	5174644	NT	Homo sapiens proline dehydrogenase (proline oxidase) (PRODH) mRNA
9793	22291		3.07	8.0E-95	AB037816.1	NT	Homo sapiens mRNA for KIAA1395 protein, partial cds
10134	22629	35617	0.75	8.0E-95	9845523	NT	Homo sapiens early growth response 2 (Krox-20 (Drosophila) homolog) (EGR2), mRNA
10592	23127	36141	1.76	8.0E-95	AF112152.1	NT	Homo sapiens developmental arteries and neural crest EGF-like protein mRNA, complete cds
11357	23811	36871	2.34	8.0E-95	10864024	NT	Homo sapiens HCF-binding transcription factor Zhangfei (ZF), mRNA
12385	24538		25.75	8.0E-95	AA629056.1	EST_HUMAN	zu84b01.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:744649 3' similar to contains L1.t1 L1 repetitive element ;
297	12953	25441	6.43	7.0E-95	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
297	12953	25442	6.43	7.0E-95	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
4456	17042	29480	5.64	7.0E-95	M95708.1	NT	Homo sapiens Ly-6-like protein (CD59) mRNA, complete cds

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4505	17089		1.35	7.0E-95	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
9144	21879	34623	0.92	4.0E-95	BE439625.1	EST_HUMAN	HTM1-288F HTM1 Homo sapiens cDNA
11548	23996	37068	1.69	4.0E-95	AW950634.1	EST_HUMAN	EST362704 MAGC resequences, MAGC Homo sapiens cDNA
11548	23996	37069	1.69	4.0E-95	AW950634.1	EST_HUMAN	EST362704 MAGC resequences, MAGC Homo sapiens cDNA
224	12885	25370	6.53	3.0E-95	AV648361.1	EST_HUMAN	AV648361 GLC Homo sapiens cDNA clone GLOBIF01 3'
5634	18263	30735	1.75	3.0E-95	BF526041.1	EST_HUMAN	602071148F1 NCL CGAP_Brr64 Homo sapiens cDNA clone IMAGE:4214147 5'
5854	24750	31200	0.72	3.0E-95	4503354	NT	Homo sapiens dedicator of cyto-kinesis 1 (DOCK1) mRNA
7404	19929	32792	1.38	3.0E-95	AW958121.1	EST_HUMAN	EST370191 MAGC resequences, MAGC Homo sapiens cDNA
7404	19929	32793	1.38	3.0E-95	AW958121.1	EST_HUMAN	EST370191 MAGC resequences, MAGC Homo sapiens cDNA
9277	21803	34753	1.71	3.0E-95	7682289	NT	Homo sapiens KIAA0763 gene product (KIAA0763), mRNA
9277	21803	34754	1.71	3.0E-95	7682289	NT	Homo sapiens KIAA0763 gene product (KIAA0763), mRNA
9682	22161	35134	0.87	3.0E-95	BF213446.1	EST_HUMAN	601845212F1 NIH_MGC 58 Homo sapiens cDNA clone IMAGE:4070451 5'
10759	23283	36296	2.2	3.0E-95	R83190.1	EST_HUMAN	yp87g11.1 Soares fetal liver spleen tNFLS Homo sapiens cDNA clone IMAGE:194468 5'
973	13585	26099	2.57	2.0E-95	4504374	NT	Homo sapiens H factor 1 (complement) (HF1) mRNA
1686	14278	26811	1.55	2.0E-95	7682027	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
1686	14278	26812	1.55	2.0E-95	7682027	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
1984	14566	27127	3.25	2.0E-95	4507512	NT	Homo sapiens tissue inhibitor of metalloproteinase 3 (Sorsby fundus dystrophy, pseudoinflammatory) (TIMP3) mRNA
1987	14569	27131	1.57	2.0E-95	BE393873.1	EST_HUMAN	601312161F1 NIH_MGC 44 Homo sapiens cDNA clone IMAGE:3658862 5'
2470	15037	27604	1.23	2.0E-95	5453665	NT	Homo sapiens G protein-coupled receptor 19 (GPR19) mRNA
2470	15037	27605	1.23	2.0E-95	5453665	NT	Homo sapiens G protein-coupled receptor 19 (GPR19) mRNA
2505	15069	27642	4.2	2.0E-95	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
2554	15118	27688	1.05	2.0E-95	4758423	NT	Homo sapiens glycine cleavage system protein H (aminomethyl carrier) (GCSH) mRNA
2844	13584	26098	8.06	2.0E-95	4504374	NT	Homo sapiens H factor 1 (complement) (HF1) mRNA
3193	15805	28278	2.54	2.0E-95	AF015452.1	NT	Homo sapiens Usurpin-gamma mRNA, complete cds
3621	18224	28701	2.98	2.0E-95	7705900	NT	Homo sapiens unconventional myosin-15 (LOC51168), mRNA
3621	18224	28702	2.98	2.0E-95	7705900	NT	Homo sapiens unconventional myosin-15 (LOC51168), mRNA
3677	16278	28745	0.72	2.0E-95	AB037807.1	NT	Homo sapiens mRNA for KIAA1386 protein, partial cds
3813	16413	28877	0.64	2.0E-95	AI290284.1	EST_HUMAN	qtm01c02.x1 Soares_NihMPu_S1 Homo sapiens cDNA clone IMAGE:1880548 3' similar to WP.T23G7.4 CE03705
4452	17038	29481	1.42	2.0E-95	7657185	NT	Homo sapiens hypothetical protein (HS322B1A), mRNA
5048	17821	30068	3.24	2.0E-95	AF105067.1	NT	Homo sapiens lipopolysaccharide-binding protein (LBP) mRNA, complete cds
5191	17758	30185	3.19	2.0E-95	7661979	NT	Homo sapiens KIAA0187 gene product (KIAA0187), mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5251	17814	30237	1.69	2.0E-95	AA447831.1	EST_HUMAN	z111407.r1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:786157 5'
5251	17814	30238	1.69	2.0E-95	AA447831.1	EST_HUMAN	z111407.r1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:786157 5'
5671	18298	30778	5.36	2.0E-95	7705764	NT	Homo sapiens CGI-48 protein (LOC51066), mRNA
5671	18298	30779	5.36	2.0E-95	7705764	NT	Homo sapiens CGI-48 protein (LOC51066), mRNA
5876	18498	31223	1.21	2.0E-95	11225608	NT	Homo sapiens angiotensin I converting enzyme (peptidyl-dipeptidase A) 2 (ACE2), mRNA
5876	18498	31224	1.21	2.0E-95	11225608	NT	Homo sapiens angiotensin I converting enzyme (peptidyl-dipeptidase A) 2 (ACE2), mRNA
6281	18899	31670	3.33	2.0E-95	M59724.1	NT	Human muscle-type phosphofructokinase (PFK-M) gene, exon 7
6577	19175	31974	1.08	2.0E-95	11427182	NT	Homo sapiens transcription factor 2, hepatic; LF-B3; variant hepatic nuclear factor (TCF2), mRNA
6577	19175	31975	1.08	2.0E-95	11427182	NT	Homo sapiens transcription factor 2, hepatic; LF-B3; variant hepatic nuclear factor (TCF2), mRNA
6885	19281	32084	2.42	2.0E-95	AF257737.1	NT	Homo sapiens ciliary dynein heavy chain 9 (DNAH9), mRNA, complete cds
6881	19595	32426	1.6	2.0E-95	11435773	NT	Homo sapiens huntingtin (Huntington disease) (HD), mRNA
9089	21606	34537	1.85	2.0E-95	11421795	NT	Homo sapiens ribophorin II (RPN2), mRNA
10283	22778	35789	0.49	2.0E-95	11434330	NT	Homo sapiens KIAA1065 protein (KIAA1065), mRNA
10602	23136	36150	2.21	2.0E-95	4757853	NT	Homo sapiens bone morphogenetic protein receptor, type IA (BMPRI1A), mRNA
11546	23994	37065	1.74	2.0E-95	7662289	NT	Homo sapiens KIAA0763 gene product (KIAA0763), mRNA
11546	23994	37066	1.74	2.0E-95	7662289	NT	Homo sapiens KIAA0763 gene product (KIAA0763), mRNA
12103	24365	30971	2.55	2.0E-95	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
12220	24442		1.41	2.0E-95	11417860	NT	Homo sapiens hypothetical protein (HS322B1A), mRNA
12534	24846	30899	8.02	2.0E-95	11418184	NT	Homo sapiens adenylosuccinate lyase (ADSL), mRNA
5799	18424	31140	7.86	1.0E-95	AA284651.1	EST_HUMAN	z123h04.r1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:714007 5' similar to TR:G1067084 G1067084 F55H2 6:
5799	18424	31141	7.86	1.0E-95	AA284651.1	EST_HUMAN	z123h04.r1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:714007 5' similar to TR:G1067084 G1067084 F55H2 6:
7523	20043	32912	4.16	1.0E-95	BF370000.1	EST_HUMAN	RC6-FN0019-290600-011-G11 FN0019 Homo sapiens cDNA
7523	20043	32913	4.16	1.0E-95	BF370000.1	EST_HUMAN	RC6-FN0019-290600-011-G11 FN0019 Homo sapiens cDNA
8135	20676	33588	1.51	9.0E-96	BE897259.1	EST_HUMAN	601437232FT NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3922423 5'
467	15415	25592	1.19	8.0E-96	BE907607.1	EST_HUMAN	601497608F NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3899761 5'
467	15415	25593	1.19	8.0E-96	BE907607.1	EST_HUMAN	601497608F NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3899761 5'
5702	18328		2.71	8.0E-96	AW836047.1	EST_HUMAN	PMO-LT0019-080300-002-009 LT0019 Homo sapiens cDNA
3980	16578	29048	0.99	7.0E-96	AF231920.1	NT	Homo sapiens chromosome 21 unknown mRNA
3360	15968	28445	1.65	6.0E-96	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
3529	16134	28614	11.93	6.0E-96	M26873.1	NT	Human glyceraldehyde-3-phosphate dehydrogenase pseudogene 3'end

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5820	18444	31166	0.85	6.0E-96	11422642	NT	Homo sapiens sialyltransferase 6 (N-acetylglucosaminide alpha 2,3-sialyltransferase) (SIAT6), mRNA
11420	23871	36932	2.52	6.0E-96	7682289	NT	Homo sapiens KIAA0763 gene product (KIAA0763), mRNA
11420	23871	36933	2.52	6.0E-96	7682289	NT	Homo sapiens KIAA0763 gene product (KIAA0763), mRNA
11461	23911	36978	1.96	6.0E-96	8923899	NT	Homo sapiens myosin, heavy polypeptide 2, skeletal muscle, adult (MYH2), mRNA
342	12994	25478	2.95	5.0E-96	AB032698.1	NT	Homo sapiens mRNA for KIAA1172 protein, partial cds
875	13489	26005	3.61	5.0E-96	AB032998.1	NT	Homo sapiens mRNA for KIAA1172 protein, partial cds
875	13489	26006	3.61	5.0E-96	AB032998.1	NT	Homo sapiens mRNA for KIAA1172 protein, partial cds
2650	15209		0.91	5.0E-96	11416787	NT	Homo sapiens phosphodiesterase 9A, cGMP-specific, rod, alpha (PDE9A), mRNA
3081	15677	28151	0.59	5.0E-96	6912735	NT	Homo sapiens transient receptor potential channel 5 (TRPC5), mRNA
5030	17604		1.8	5.0E-96	X60812.1	NT	H. sapiens DNA for monoamine oxidase type A (7) (partial)
6758	18351	32180	1.1	5.0E-96	AF149773.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
6878	19612	32445	4.05	5.0E-96	11424399	NT	Homo sapiens A kinase (PKA) anchor protein 1 (AKAP1), mRNA
6878	19612	32446	4.05	5.0E-96	11424399	NT	Homo sapiens A kinase (PKA) anchor protein 1 (AKAP1), mRNA
7090	19661	32501	0.76	5.0E-96	AB023177.1	NT	Homo sapiens mRNA for KIAA0960 protein, partial cds
7524	20044	32814	1.7	5.0E-96	AB024334.1	NT	Homo sapiens mRNA for 14-3-3gamma, complete cds
8050	20592	33499	1.62	5.0E-96	M68347.1	NT	Human type IV collagenase (CLG4B) gene, exon 5
8050	20592	33500	1.62	5.0E-96	M68347.1	NT	Human type IV collagenase (CLG4B) gene, exon 5
11618	24080	37124	1.66	5.0E-96	7661973	NT	Homo sapiens KIAA0175 gene product (KIAA0175), mRNA
4269	16855		8.01	3.0E-96	H68656.1	EST_HUMAN	Yr87h12.1 Scores fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:212327 5'
440	13073		3.68	2.0E-96	4503098	NT	Homo sapiens chondroitin sulfate proteoglycan 4 (melanoma-associated) (CSPG4), mRNA
777	13396	25897	1.52	2.0E-96	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
4871	17447	26898	1.56	2.0E-96	BE148074.1	EST_HUMAN	RC3-HT0230-040500-110-g02 HT0230 Homo sapiens cDNA
8911	21449		5.45	2.0E-96	AV889481.1	EST_HUMAN	AV889481 GKC Homo sapiens cDNA clone GKCFMD07 5'
11795	24176		1.71	2.0E-96	AW249440.1	EST_HUMAN	2818351 Spime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2818351 5'
699	13321	25808	2.62	1.0E-96	Y18890.1	NT	Human endogenous retrovirus type K (HERV-K), gag, pol and env genes
1817	14407	26951	3.32	1.0E-96	AW955054.1	EST_HUMAN	EST1367124 IMAGE resequences, MAGC Homo sapiens cDNA
1817	14407	26952	3.32	1.0E-96	AW955054.1	EST_HUMAN	EST1367124 IMAGE resequences, MAGC Homo sapiens cDNA
2272	14846	27421	1.3	1.0E-96	M75967.1	NT	Human hepatocyte growth factor gene, exon 1
2272	14846	27422	1.3	1.0E-96	M75967.1	NT	Human hepatocyte growth factor gene, exon 1
2306	15398	27455	1.1	1.0E-96	U51472.2	NT	Felis catus superfast myosin heavy chain (sMyHC) mRNA, complete cds
7045	18095	30455	1.06	1.0E-96	6912735	NT	Homo sapiens transient receptor potential channel 5 (TRPC5), mRNA
8154	20695	33608	0.9	1.0E-96	7661803	NT	Homo sapiens HSPC144 protein (HSPC144), mRNA
8154	20695	33609	0.9	1.0E-96	7661803	NT	Homo sapiens HSPC144 protein (HSPC144), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLASTE Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8650	21189	34107	22.03	1.0E-96	11419429	NT	Homo sapiens similar to ectonucleotide pyrophosphatase/phosphodiesterase 3 (H. sapiens) (LOC63214), mRNA
8784	21323	34247	2.21	1.0E-96	AF274863.1	NT	Homo sapiens secretory pathway component Sec31B-1 mRNA, alternatively spliced, complete cds
10064	22559	35553	0.87	1.0E-96	AB033116.1	NT	Homo sapiens mRNA for KIAA1290 protein, partial cds
10064	22559	35554	0.87	1.0E-96	AB033116.1	NT	Homo sapiens mRNA for KIAA1290 protein, partial cds
11781	18023	30404	2.56	1.0E-96	4826863	NT	Homo sapiens neuronal cell adhesion molecule (NRCAM) mRNA
11781	18023	30405	2.56	1.0E-96	4826863	NT	Homo sapiens neuronal cell adhesion molecule (NRCAM) mRNA
3370	15978	28455	0.62	6.0E-97	BF245240.1	EST_HUMAN	601863712F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4081202 5'
7558	20076		2.76	6.0E-97	BE141849.1	EST_HUMAN	IL5-H10117-011099-004-D07 H10117 Homo sapiens cDNA
8864	21403	34327	0.74	6.0E-97	BE98012.1	EST_HUMAN	601440317F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3925133 5'
8864	21403	34328	0.74	6.0E-97	BE98012.1	EST_HUMAN	601440317F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3925133 5'
10486	22880	35987	0.52	6.0E-97	AA320332.1	EST_HUMAN	EST22672 Adipose tissue, white II Homo sapiens cDNA 5' end
10486	22880	35988	0.52	6.0E-97	AA320332.1	EST_HUMAN	EST22672 Adipose tissue, white II Homo sapiens cDNA 5' end
11284	23737	36793	1.8	6.0E-97	X15804.1	NT	Human mRNA for alpha-actinin
7957	20499	33409	2.45	5.0E-97	AL043314.2	EST_HUMAN	DKFZp434N0323_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434N0323 5'
8085	20626	33540	12.64	5.0E-97	AA18026.1	EST_HUMAN	z67e12.s1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:767758 3' similar to TR:G1304125
9593	22093	35057	2.67	5.0E-97	BF154912.1	EST_HUMAN	RCO-B10812-250900-032-a09 BT0812 Homo sapiens cDNA
11421	23872	36934	1.96	5.0E-97	BE148597.1	EST_HUMAN	MRO-H10241-150500-010-b02 HT0241 Homo sapiens cDNA
11421	23872	36935	1.99	5.0E-97	BE148597.1	EST_HUMAN	MRO-H10241-150500-010-b02 HT0241 Homo sapiens cDNA
975	13587	26102	6.69	4.0E-97	BE004436.1	EST_HUMAN	CMO-BN0106-170300-293-a06 BN0106 Homo sapiens cDNA
1953	14537	27093	0.97	4.0E-97	5453572	NT	Homo sapiens brefeldin A-inhibited guanine nucleotide-exchange protein 2 (BIG2), mRNA
5754	18380	31091	17.27	4.0E-97	4557326	NT	Homo sapiens apolipoprotein H (beta-2-glycoprotein I) (APOH) mRNA
6912	19571	32399	6.05	4.0E-97	Y11339.2	NT	Homo sapiens mRNA for GalNAc alpha-2, 6-sialyltransferase I, long form
6912	19571	32400	6.05	4.0E-97	Y11339.2	NT	Homo sapiens mRNA for GalNAc alpha-2, 6-sialyltransferase I, long form
7088	19659	32498	1.01	4.0E-97	7710125	NT	Homo sapiens ligase III, DNA, ATP-dependent (LIG3), transcript variant alpha, mRNA
7128	19488	32286	1.01	4.0E-97	11422155	NT	Homo sapiens cystic fibrosis transmembrane conductance regulator, ATP-binding cassette (sub-family C, member 7) (CFTR), mRNA
7778	20288	33186	0.74	4.0E-97	10947053	NT	Homo sapiens ankyrin 2, neuronal (ANK2), transcript variant 2, mRNA
7778	20288	33187	0.74	4.0E-97	10947053	NT	Homo sapiens ankyrin 2, neuronal (ANK2), transcript variant 2, mRNA
8078	20620	33533	0.84	4.0E-97	4557708	NT	Homo sapiens laminin, alpha 2 (merosin, congenital muscular dystrophy) (LAMA2) mRNA
8299	20840	33761	1.57	4.0E-97	11421793	NT	Homo sapiens v-src avian sarcoma (Schmidt-Ruppin A-2) viral oncogene homolog (SRC), mRNA
8555	21094	34014	0.73	4.0E-97	11423233	NT	Homo sapiens cytochrome P450, subfamily IVB, polypeptide 1 (CYP4B1), mRNA



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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9172	21749	34692	1.23	4.0E-97	AB011166.1	NT	Homo sapiens mRNA for KIAA0594 protein, partial cds
9172	21749	34693	1.23	4.0E-97	AB011166.1	NT	Homo sapiens mRNA for KIAA0594 protein, partial cds
10333	22827	35822	0.75	4.0E-97	11431060	NT	Homo sapiens N-myc (and STAT) interactor (NMI), mRNA
11042	23556	36591	1.85	4.0E-97	11883122	NT	Homo sapiens AXL receptor tyrosine kinase (AXL), transcript variant 1, mRNA
11042	23556	36592	1.85	4.0E-97	11883122	NT	Homo sapiens AXL receptor tyrosine kinase (AXL), transcript variant 1, mRNA
11977	24288		4.75	4.0E-97	11418318	NT	Homo sapiens G-2 and S-phase expressed 1 (GTSE1), mRNA
264	12922	25408	2.37	3.0E-97	AB032998.1	NT	Homo sapiens mRNA for KIAA1172 protein, partial cds
907	13521	26039	8.51	3.0E-97	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
907	13521	26040	8.51	3.0E-97	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
1490	15443	26623	2.15	3.0E-97	4758813	NT	Homo sapiens N-myc (and STAT) interactor (NMI), mRNA
2483	15400	27618	1.36	3.0E-97	U36255.1	NT	Human beta-prime-adaptin (BAM22) gene, exon 7
3205	15817	28293	37.82	3.0E-97	K02212.1	NT	Human alpha-1-antitrypsin gene (S variant), complete cds
3298	15910	28389	1.48	3.0E-97	5174478	NT	Homo sapiens pericentriin (PCNT) mRNA
3893	16492	28952	1.04	3.0E-97	AF138523.1	NT	Homo sapiens bile salt export pump (BSEP) mRNA, complete cds
4894	17468	29925	28.9	1.0E-97	4503470	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
6558	19156	31952	2.38	1.0E-97	BE568486.1	EST_HUMAN	601339520F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3681821 5'
9365	20304	33206	0.6	1.0E-97	AW379976.1	EST_HUMAN	RC0-HT0258-211189-011-g05 HT0258 Homo sapiens cDNA
9365	20304	33207	0.6	1.0E-97	AW379976.1	EST_HUMAN	RC0-HT0258-211189-011-g05 HT0258 Homo sapiens cDNA
9679	22178	35153	1.21	1.0E-97	R10887.1	EST_HUMAN	y38c08.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:128134 3'
10584	23119	36134	4.07	1.0E-97	11427757	NT	Homo sapiens KIAA0649 gene product (KIAA0649), mRNA
10584	23119	36135	4.07	1.0E-97	11427757	NT	Homo sapiens KIAA0649 gene product (KIAA0649), mRNA
11189	23684	36743	3.53	1.0E-97	AA563761.1	EST_HUMAN	h28g02.s1 NCL_CGAP_Co11 Homo sapiens cDNA clone IMAGE:1014862 3'
11343	23041	36050	18.96	1.0E-97	11426272	NT	Homo sapiens ribosomal protein S15 (RPS15), mRNA
11343	23041	36051	18.96	1.0E-97	11426272	NT	Homo sapiens ribosomal protein S15 (RPS15), mRNA
934	13547	26064	5.55	9.0E-98	BE080973.1	EST_HUMAN	PM4-BT0724-010-008-a12 BT0724 Homo sapiens cDNA
1319	13913	26434	1.41	9.0E-98	8393092	NT	Homo sapiens cat eye syndrome critical region gene 1 (CECR1), mRNA
6445	19047		0.67	9.0E-98	AJ250713.1	NT	Homo sapiens CLDN12 gene for claudin-12
7865	20407	33314	7.35	9.0E-98	4758119	NT	Homo sapiens death-associated protein (DAP), mRNA
7865	20407	33315	7.35	9.0E-98	4758119	NT	Homo sapiens death-associated protein (DAP), mRNA
9044	21581	34510	2	9.0E-98	X06989.1	NT	Human mRNA for amyloid A(751) protein
9151	21686	34629	1.94	9.0E-98	11321580	NT	Homo sapiens succinate-CoA ligase, GDP-forming, alpha subunit (SUCLG1), mRNA
9216	21733	34676	1.46	9.0E-98	AB037786.1	NT	Homo sapiens mRNA for KIAA1365 protein, partial cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9282	21788		1.25	9.0E-98	AF05726.1	NT	Homo sapiens 17-beta-hydroxysteroid dehydrogenase IV (HSD17B4) gene, exon 8
9289	21889	34835	1.15	9.0E-98	4507070	NT	Homo sapiens SW/ISNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 3 (SMARCA3) mRNA
9289	21889	34836	1.15	9.0E-98	4507070	NT	Homo sapiens SW/ISNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 3 (SMARCA3) mRNA
10161	22656	35651	0.54	9.0E-98	AF141325.2	NT	Homo sapiens inositol polyphosphate 1-phosphatase (INPP1) gene, complete cds
10288	22763	35750	0.5	9.0E-98	11431544	NT	Homo sapiens protease-activated receptor 3 (PAR3), mRNA
10883	23404	36422	2.37	9.0E-98	AB023222.1	NT	Homo sapiens mRNA for KIAA1005 protein, partial cds
10883	23404	36423	2.37	9.0E-98	AB023222.1	NT	Homo sapiens mRNA for KIAA1005 protein, partial cds
11884	13547	26064	4.29	9.0E-98	BE090973.1	EST_HUMAN	PM4-BT0724-010400-008-a12 BT0724 Homo sapiens cDNA
27	12708		0.82	8.0E-98	AJ251158.1	NT	Homo sapiens partial MICB gene for MHC class I chain-related protein B, exons 2-3 and joined CDS
1607	14199	26732	1.04	8.0E-98	5031810	NT	Homo sapiens IL2-inducible T-cell kinase (ITK), mRNA
1607	14199	26733	1.04	8.0E-98	5031810	NT	Homo sapiens IL2-inducible T-cell kinase (ITK), mRNA
1764	14354	28900	1.84	8.0E-98	AB017007.1	NT	Homo sapiens PMS2L16 mRNA, partial cds
1764	14354	28901	1.84	8.0E-98	AB017007.1	NT	Homo sapiens PMS2L16 mRNA, partial cds
3863	18481	28925	7.16	8.0E-98	J04469.1	NT	Human mitochondrial creatine kinase (CKMT) gene, complete cds
5276	17838		1.43	8.0E-98	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
6233	18842	31814	1.18	5.0E-98	BE885873.1	EST_HUMAN	601507503F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3909097 5'
12398	24558	30908	1.68	4.0E-98	BE348727.1	EST_HUMAN	h68f02.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3151899 3'
2222	14797	27370	1.15	3.0E-98	AJ403124.1	EST_HUMAN	AJ403124.3.4 (downregulated in larynx carcinoma) Homo sapiens cDNA clone l8
2639	15198	27772	1.67	3.0E-98	AB014607.1	NT	Homo sapiens mRNA for KIAA0707 protein, partial cds
2777	15330		1.97	3.0E-98	AA077498.1	EST_HUMAN	7B18H01 Chromosome 7 Fetal Brain cDNA Library/Homo sapiens cDNA clone 7B18H01
7026	19560	32386	1.66	3.0E-98	11419210	NT	Homo sapiens activator of S phase kinase (ASK), mRNA
7026	19560	32387	1.66	3.0E-98	11419210	NT	Homo sapiens activator of S phase kinase (ASK), mRNA
8696	21225	34145	3.05	3.0E-98	H46698.1	EST_HUMAN	y017g09.r1 Soares adult brain N2b5HB55Y Homo sapiens cDNA clone IMAGE:178240 5'
9221	21737	34679	0.77	3.0E-98	8922098	NT	Homo sapiens uncharacterized bone marrow protein BM039 (BM039), mRNA
9798	22296	35276	1.8	3.0E-98	AJ403124.1	EST_HUMAN	AJ403124.3.4 (downregulated in larynx carcinoma) Homo sapiens cDNA clone l8
9798	22296	35280	1.8	3.0E-98	AJ403124.1	EST_HUMAN	AJ403124.3.4 (downregulated in larynx carcinoma) Homo sapiens cDNA clone l8
10369	22863	35856	0.86	3.0E-98	BE900454.1	EST_HUMAN	601673886F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3956517 5'
10831	23352	36367	3.79	3.0E-98	U59309.1	NT	Human fumarate precursor (FH) mRNA, nuclear gene encoding mitochondrial protein, complete cds
12598	24885		5.13	3.0E-98	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
765	13384	25863	0.81	2.0E-98	BE261694.1	EST_HUMAN	601149486F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3502245 5'

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2124	14702	27272	3.36	2.0E-98	BE294281.1	EST_HUMAN	601172858F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3528134 5'
2279	14853	27431	1.37	2.0E-98	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
4384	16971	29419	0.74	2.0E-98	AF032897.1	NT	Homo sapiens potassium channel subunit (HERG-3) mRNA, complete cds
4432	17018	29458	4.65	2.0E-98	4758331	NT	Homo sapiens fatty-acid-Coenzyme A ligase, long-chain 4 (FACL4) mRNA
4953	17528	29968	0.96	2.0E-98	AF218902.1	NT	Homo sapiens attractin precursor (ATRN) gene, exon 16
4953	17528	29969	0.96	2.0E-98	AF218902.1	NT	Homo sapiens attractin precursor (ATRN) gene, exon 16
5578	18210	30660	4.63	2.0E-98	7706512	NT	Homo sapiens PDZ domain-containing guanine nucleotide exchange factor 1 (LOC51735), mRNA
6761	18354	32163	1.03	2.0E-98	4505788	NT	Homo sapiens phosphatidylinositol 3-kinase, class 2, alpha polypeptide (PIK3C2A) mRNA
7619	20132	33008	1.13	2.0E-98	11431271	NT	Homo sapiens hypothetical protein FLJ10488 (FLJ10488), mRNA
7619	20132	33009	1.13	2.0E-98	11431271	NT	Homo sapiens hypothetical protein FLJ10488 (FLJ10488), mRNA
8544	21083	34004	3.84	2.0E-98	11428813	NT	Homo sapiens SH3-domain GRB2-like 2 (SH3GL2), mRNA
8544	21083	34005	3.84	2.0E-98	11428813	NT	Homo sapiens SH3-domain GRB2-like 2 (SH3GL2), mRNA
8825	21164	34078	0.62	2.0E-98	L76666.1	NT	Homo sapiens NKAT4b mRNA, complete cds
8825	21164	34079	0.62	2.0E-98	L76666.1	NT	Homo sapiens NKAT4b mRNA, complete cds
9456	21982	34834	3.9	2.0E-98	X12664.1	NT	H. sapiens arginase gene exon 3 (EC 3.5.3.1)
10312	22806		1.31	2.0E-98	7705868	NT	Homo sapiens AIM-1 protein (LOC51151), mRNA
11078	23580	36828	1.6	2.0E-98	U22028.1	NT	Human cytochrome P450 (CYP2A13) gene, complete cds
11899	24305	30989	1.62	2.0E-98		NT	Homo sapiens chromosome 12 open reading frame 3 (C12ORF3), mRNA
430	13063	25558	57.29	1.0E-98	A1862007.1	EST_HUMAN	tw36b04.x1 NCI CGAP_U11 Homo sapiens cDNA clone IMAGE:2281743 3' similar to SW:RL2B_HUMAN
480	13113	25603	2.16	1.0E-98	AW989611.1	EST_HUMAN	P29318 60S RIBOSOMAL PROTEIN L23A. ;
1832	14420	26970	13.46	1.0E-98	N49818.1	EST_HUMAN	PM0-BN0065-100300-001-c08 BN0065 Homo sapiens cDNA
5520	18152	30566	3.14	1.0E-98	AA185854.1	EST_HUMAN	yw23705.1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:243585 5' similar to
5758	18384	31097	1.12	1.0E-98	BE390827.1	EST_HUMAN	PIR:S54204 S54204 ribosomal protein L29 - human ;
5758	18384	31098	1.12	1.0E-98	BE390827.1	EST_HUMAN	z98c08.r1 Stragene muscle 937208 Homo sapiens cDNA clone IMAGE:628240 5' similar to TR:G808562
8928	21466	34383	8.27	1.0E-98	AF141349.1	NT	G806582 NEBULIN. ;
8928	21466	34384	8.27	1.0E-98	AF141349.1	NT	G806582 NEBULIN. ;
5984	18604	31338	0.93	9.0E-99	A1905004.1	EST_HUMAN	601284988F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3606892 5'
5984	18604	31339	0.93	9.0E-99	A1905004.1	EST_HUMAN	601284988F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3606892 5'
6191	18801	31571	4.33	9.0E-99	AW988635.1	EST_HUMAN	Homo sapiens beta-tubulin mRNA, complete cds
11001	23515	38548	3.39	9.0E-99	A1478828.1	EST_HUMAN	Homo sapiens beta-tubulin mRNA, complete cds
							QV-BT073-181298-012 BT073 Homo sapiens cDNA
							QV-BT073-181298-012 BT073 Homo sapiens cDNA
							EST380711 IMAGE reserences, MAGJ Homo sapiens cDNA
							tm68h07.x1 NCI CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2163421 3' similar to SW:BD_HUMAN
							P55957 BH3 INTERACTING DOMAIN DEATH AGONIST ;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11001	23515	36550	3.39	9.0E-99	AI479829.1	EST_HUMAN	tm69h07.x1 NCI_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2163421 3' similar to SW:BIID_HUMAN P55957 BH3 INTERACTING DOMAIN DEATH AGONIST ;
11292	23744	36801	1.97	9.0E-99	AA134604.1	EST_HUMAN	zn90d02.r1 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:565443 5' similar to TR:G662994 G662994 GPI-ANCHORED PROTEIN P137 ;
11627	24089	37133	2.11	9.0E-99	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region; segment 2/2
8661	21200	34118	1.59	8.0E-99	9635487	NT	Human endogenous retrovirus, complete genome
5996	18619	31355	10.3	7.0E-99	AF035808.1	NT	Homo sapiens oscillin (hln) gene, exon 5
11477	23927	36998	2.52	7.0E-99	AF001886.1	NT	Homo sapiens NK-receptor (KIR-G2) gene, linker region exon
497	13129	25618	0.57	6.0E-99	U10991.1	NT	Human G2 protein mRNA, partial cds
4859	17437	29887	1.3	6.0E-99	4502660	NT	Homo sapiens CD34 antigen (CD34) mRNA
5382	17941	30355	1.01	6.0E-99	8923244	NT	Homo sapiens hypothetical protein FLJ20272 (FLJ20272), mRNA
6711	19305	32109	1	6.0E-99	7706136	NT	Homo sapiens GAP-like protein (LOC51306), mRNA
6780	19371	32186	1.39	6.0E-99	L43610.1	NT	Homo sapiens polycystic kidney disease (PKD1) gene, exons 27-30
6780	19371	32187	1.39	6.0E-99	L43610.1	NT	Homo sapiens polycystic kidney disease (PKD1) gene, exons 27-30
8048	20580	33497	1.11	6.0E-99	X99101.1	NT	H. sapiens mRNA for estrogen receptor
8700	21239	34162	1.88	6.0E-99	AB036429.1	NT	Homo sapiens NDST4 mRNA for N-deacetylase/N-sulfatransferase 4, complete cds
8797	21336	34281	4.03	6.0E-99	AF080255.1	NT	Homo sapiens testicular protein mRNA, complete cds
8797	21336	34282	4.03	6.0E-99	AF080255.1	NT	Homo sapiens testicular protein mRNA, complete cds
8854	21393	34315	0.62	6.0E-99	11431894	NT	Homo sapiens inositol 1,4,5-triphosphate receptor, type 1 (ITPR1), mRNA
8854	21393	34316	0.62	6.0E-99	11431894	NT	Homo sapiens inositol 1,4,5-triphosphate receptor, type 1 (ITPR1), mRNA
10598	23132	36146	4.18	6.0E-99	11526299	NT	Homo sapiens BH3 interacting domain death agonist (BID), mRNA
953	13585	26077	9.63	5.0E-99	U35484.1	NT	Human protein C inhibitor (PCI-B) mRNA, complete cds
953	13585	26078	9.63	5.0E-99	U35484.1	NT	Human protein C inhibitor (PCI-B) mRNA, complete cds
2007	14589	27149	1.33	5.0E-99	Y11365.1	NT	H. sapiens IMPA gene, exon 8
4663	17245	29699	1.44	5.0E-99	AF009660.1	NT	Homo sapiens T cell receptor beta locus, TORBV7S3A2 to TORBV12S2 region
12009	24311		2.1	5.0E-99	BE890172.1	EST_HUMAN	601513157F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3914391 5'
8263	20804		5.49	3.0E-99	M95596.1	NT	Human E2A/HLA fusion protein (E2A/HLF) mRNA, complete cds
1282	13878		15.39	2.0E-99	AW274792.1	EST_HUMAN	xp09e06.x1 NCI_CGAP_HN9 Homo sapiens cDNA clone IMAGE:2739874 3' similar to gb:M31212 MYOSIN LIGHT CHAIN ALKALI, NON-MUSCLE ISOFORM (HUMAN);
3297	15808	28388	1.27	2.0E-99	M30938.1	NT	Human Ku (p70/p80) subunit mRNA, complete cds
4641	17223	29677	1.67	2.0E-99	AF095703.1	NT	Homo sapiens short chain L-3-hydroxyacyl-CoA dehydrogenase precursor (HADHSC) gene, nuclear gene encoding mitochondrial protein, complete cds
7667	20179	33066	1.28	2.0E-99	AF257737.1	NT	Homo sapiens ciliary dynein heavy chain 9 (DNAH9) mRNA, complete cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8641	21180	34100	9.63	2.0E-99	W23507.1	EST_HUMAN	zb46d06.r1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:306635 5' similar to
9079	21615	34550	0.63	2.0E-99	R78254.1	EST_HUMAN	gbM15182 BETA-GLUCURONIDASE PRECURSOR (HUMAN);
10884	23498	36528	3.8	2.0E-99	AF247457.2	NT	y81b09.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:145625 5'
11617	24059	37123	1.61	2.0E-99	10863960	NT	Homo sapiens myosin X (MYO10) mRNA, complete cds
337	12889	25476	1.46	1.0E-99	AF114487.1	NT	Homo sapiens potassium channel, subfamily K, member 10 (KCNK10), mRNA
402	13048	25537	1.21	1.0E-99	11526150	NT	Homo sapiens interseotin long isoform (ITSN) mRNA, complete cds
1466	14058	26592	2.52	1.0E-99	M30538.1	NT	Homo sapiens GA-binding protein transcription factor, alpha subunit (80kD) (GABPA), mRNA
1603	14195	26726	2.14	1.0E-99	AF192523.1	NT	Human Ku (p70/p80) subunit mRNA, complete cds
1603	14195	26727	2.14	1.0E-99	AF192523.1	NT	Homo sapiens truncated Niemann-Pick C3 protein (NPC3) mRNA, complete cds
1971	14555	27111	0.91	1.0E-99	4503730	NT	Homo sapiens FK506-binding protein 6 (36kD) (FKBP6) mRNA, complete cds
1971	14555	27112	0.91	1.0E-99	4503730	NT	Homo sapiens FK506-binding protein 6 (36kD) (FKBP6) mRNA, and translated products
3121	15735	28204	0.9	1.0E-99	J03171.1	NT	Human interferon-alpha receptor (HuIFN-alpha-Rec) mRNA, complete cds
4469	17055	29499	2.98	1.0E-99	AF098018.1	NT	Homo sapiens fatty acid amide hydrolase (FAAH) gene, exon 14
4469	17055	29500	2.98	1.0E-99	AF098018.1	NT	Homo sapiens fatty acid amide hydrolase (FAAH) gene, exon 14
6896	19630	32467	2.18	1.0E-99	11421007	NT	Homo sapiens glycine receptor, alpha 2 (GLRA2), mRNA
6896	19630	32468	2.18	1.0E-99	11421007	NT	Homo sapiens glycine receptor, alpha 2 (GLRA2), mRNA
7183	24778	32574	0.8	1.0E-99	X88022.1	NT	H sapiens EG-AP gene exon 2
9127	21682		1.04	1.0E-99	11419721	NT	Homo sapiens ALEX1 protein (LOC51309), mRNA
9439	21965	34914	1.81	1.0E-99	AW340174.1	EST_HUMAN	hd02h02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2908371 3' similar to TR.O02711
11084	23576	36614	1.82	1.0E-99	5901979	NT	O02711 PRO-POLYUTPASE POLYPROTEIN
11255	23785	36841	2.94	1.0E-99	AB023222.1	NT	Homo sapiens heat shock transcription factor 2 binding protein (HSF2BP), mRNA
11557	24005	37077	1.8	1.0E-99	AF223391.1	NT	Homo sapiens mRNA for KIAA1005 protein, partial cds
11637	24076	37136	1.57	1.0E-99	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
11764	24155				AF240786.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
1	12682	25138	1.19	1.0E-100	AL163247.2	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
2	12682	25138	1.73	1.0E-100	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
72	12750	25227	1.35	1.0E-100	11418230	NT	Homo sapiens chromosome 21 segment HS21C047
72	12750	25228	1.35	1.0E-100	11418230	NT	Homo sapiens Testis-specific XK-related protein on Y (XXRY), mRNA
90	12768	25250	0.79	1.0E-100	AW275237.1	EST_HUMAN	Homo sapiens Testis-specific XK-related protein on Y (XXRY), mRNA
							xv78b11.x1 NCI_CGAP_Brim53 Homo sapiens cDNA clone IMAGE:2824605 3'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
180	12842	25326	1.18	1.0E-100	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C006
339	12991	25478	1.78	1.0E-100	AL163249.2	NT	Homo sapiens chromosome 21 segment HS21C049
365	13014	25497	2.06	1.0E-100	T05087.1	EST_HUMAN	EST02975 Fetal brain, Stratagene (cat#836206) Homo sapiens cDNA clone HFBCR32
462	13096						Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
515	13148		1.84	1.0E-100	AF003528.1	NT	
535	13168		8.1	1.0E-100	X89631.1	NT	G.gorilla DNA for ZNF80 gene homolog
1057	13662	25647	1.78	1.0E-100	BE180609.1	EST_HUMAN	RC3-HT0825-040500-022-509 HT0625 Homo sapiens cDNA
1057	13662	26172	3.18	1.0E-100	7661685	NT	Homo sapiens DKFZP586M0122 protein (DKFZP586M0122), mRNA
1057	13662	26173	3.18	1.0E-100	7661685	NT	Homo sapiens DKFZP586M0122 protein (DKFZP586M0122), mRNA
1483	14076	26614	0.93	1.0E-100	BF530735.1	EST_HUMAN	602072064F1 NCI_CGAP_Bim87 Homo sapiens cDNA clone IMAGE:4215039 5'
1594	14187		2.49	1.0E-100	AW207555.1	EST_HUMAN	UI-H-B11-afk-c-07-0-UI.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2722164 3'
1598	14190	26721	1.32	1.0E-100	AL200857.1	EST_HUMAN	qf6208.x1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1754633 3' similar to SW:CYT_COTJA
2284	14858		2.78	1.0E-100	D83348.1	NT	P81061 CYSTATIN ;
2482	15048	27617	0.87	1.0E-100	X62468.1	NT	Rat mRNA for short type PB-cadherin, complete cds
2731	15266	27853	2.8	1.0E-100	11418976	NT	H. sapiens mRNA for IFN-gamma (pKC-0)
3053	15869	29324	3.92	1.0E-100	D11078.1	NT	Homo sapiens KIAA0957 protein (KIAA0957), mRNA
4289	16875	29348	1.83	1.0E-100	AF057354.1	NT	Homo sapiens RGH2 gene, retrovirus-like element
4320	16906	30239	2.66	1.0E-100	4503792	NT	Homo sapiens myotubularin-related protein 1a mRNA, partial cds
5253	17816	30240	3.16	1.0E-100	5032104	NT	Homo sapiens follicle stimulating hormone receptor (FSHR) mRNA
5253	17816	30240	3.16	1.0E-100	5032104	NT	Homo sapiens small optic lobes (Drosophila) homolog (SOLH) mRNA
5493	18127	30535	1.55	1.0E-100	BF244218.1	EST_HUMAN	Homo sapiens small optic lobes (Drosophila) homolog (SOLH) mRNA
5699	18325	30828	0.87	1.0E-100	AW075983.1	EST_HUMAN	601863164F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4080999 5'
5879	18501	31227	1.93	1.0E-100	AU118182.1	EST_HUMAN	xa82801.x1 NCI_CGAP_CVL1 Homo sapiens cDNA clone IMAGE:2573305 3' similar to gb:X12433
5920	18542	31268	1.36	1.0E-100	AF135116.1	NT	PROTEIN PHPS1-2 (HUMAN).
6003	18623	31358	10.01	1.0E-100	X14690.1	NT	AU118182 HEMBA1 Homo sapiens cDNA clone HEMBA1003048 5'
6311	18918	31692	1.06	1.0E-100	4557598	NT	Homo sapiens NF-E2-related factor 3 gene, complete cds
6311	18918	31693	1.06	1.0E-100	4557598	NT	Human mRNA for plasma inter-alpha-trypsin inhibitor heavy chain H(3)
6566	19164		1.29	1.0E-100	5729867	NT	Homo sapiens ER to nucleus signalling 1 (ERN1) mRNA
6623	19220	32025	5.02	1.0E-100	AU140214.1	EST_HUMAN	Homo sapiens ER to nucleus signalling 1 (ERN1) mRNA
6787	19378	32193	1.46	1.0E-100	R10867.1	EST_HUMAN	Homo sapiens hct domain and RLD 2 (HERC2), mRNA
6866	19600	32431	2.42	1.0E-100	7382479	NT	AU140214 PLAGE2 Homo sapiens cDNA clone PLAGE2000137 5'
							yf38c08.s1 Soares fetal liver spleen 1NFS Homo sapiens cDNA clone IMAGE:129134 3'
							Homo sapiens Rho GTPase activating protein 6 (ARHGAP6), transcript variant 4, mRNA

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6929	19588	32417	1.2	1.0E-100	AA496841.1	EST_HUMAN	ae33b06.r1 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:897587 5' similar to TR:G487418
6929	19588	32418	1.2	1.0E-100	AA496841.1	EST_HUMAN	G487418 ACTIN FILAMENT-ASSOCIATED PROTEIN.
6966	19543	32368	1.25	1.0E-100	BF378478.1	EST_HUMAN	ae33b06.r1 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:897587 5' similar to TR:G487418
6966	19543	32367	1.25	1.0E-100	BF378478.1	EST_HUMAN	G487418 ACTIN FILAMENT-ASSOCIATED PROTEIN.
6974	19550	32375	8.47	1.0E-100	X04571.1	NT	MR1-TN0046-060900-004-b05 TN0046 Homo sapiens cDNA
8469	21009	33926	12.09	1.0E-100	BF103853.1	EST_HUMAN	MR1-TN0046-060900-004-b05 TN0046 Homo sapiens cDNA
8503	21042		4.61	1.0E-100	AL163203.2	NT	Human mRNA for kidney epidermal growth factor (EGF) precursor
8944	21482	34404	0.67	1.0E-100	AU116951.1	EST_HUMAN	601647357F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:3931310 5'
8944	21482	34405	0.67	1.0E-100	AU116951.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C003
9159	21694	34638	3.35	1.0E-100	AB040918.1	NT	AU116951 HEMBA1 Homo sapiens cDNA clone HEMBA1000343 5'
9234	21856		1.96	1.0E-100	AJ972388.1	EST_HUMAN	AU116951 HEMBA1 Homo sapiens cDNA clone HEMBA1000343 5'
9354	20293	33192	1.65	1.0E-100	AW998811.1	EST_HUMAN	Human sapiens mRNA for KIAA1485 protein, partial cds
9407	21916		1.74	1.0E-100	AU127720.1	EST_HUMAN	wt37g09.x1 NCI_CGAP_P28 Homo sapiens cDNA clone IMAGE:2489920 3' similar to contains element
9504	22004	34961	2.84	1.0E-100	AB046846.1	NT	MER22 repetitive element.
9504	22004	34962	2.84	1.0E-100	AB046846.1	NT	PM0-BN0065-100300-001-c06 BN0065 Homo sapiens cDNA
9757	22255	35237	1.81	1.0E-100	AW630487.1	EST_HUMAN	AU127720 NT2RP2 Homo sapiens cDNA clone NT2RP2001918 5'
9757	22255	35238	1.81	1.0E-100	AW630487.1	EST_HUMAN	Homo sapiens mRNA for KIAA1628 protein, partial cds
9917	22413	35388	0.5	1.0E-100	AV732101.1	EST_HUMAN	hh83c11.y1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2869396 5'
10366	22860	35653	1.46	1.0E-100	BF347619.1	EST_HUMAN	hh83c11.y1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2869396 5'
10452	22946		1.38	1.0E-100	Y10391.1	NT	AV732101 HTF Homo sapiens cDNA clone HTFBIG01 5'
10638	23170	36181	7.35	1.0E-100	BF327292.1	EST_HUMAN	602020554F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4156185 5'
11166	23673	36719	2.59	1.0E-100	X94633.1	NT	Human endogenous retrovirus HERV-K, pol gene
11166	23673	36720	2.59	1.0E-100	X94633.1	NT	MR0-BN0070-270300-008-h11 BN0070 Homo sapiens cDNA
11232	23763	36818	4.28	1.0E-100	AF111170.3	NT	H. sapiens CD97 gene exon 4
11232	23763	36819	4.28	1.0E-100	AF111170.3	NT	H. sapiens CD97 gene exon 4
11262	12682	25138	2.14	1.0E-100	AL163247.2	NT	Homo sapiens 14q32 Jagged2 gene, complete cds; and unknown gene
11529	23977		1.65	1.0E-100	AF268285.1	NT	Homo sapiens chromosome 21 segment HS21C047
11683	24100	37150	9.41	1.0E-100	AF240786.1	NT	Homo sapiens golgin-like protein (GLP) gene, complete cds
12000	24306	30990	2.92	1.0E-100	11545732	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
12642	24717	30868	3.53	1.0E-100	11417874	NT	Homo sapiens SH3-domain binding protein 1 (SH3BP1), mRNA
							Homo sapiens transcobalamin II; macrocytic anemia (TCN2), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
81	12758	25240	2.04	1.0E-101	7110714	NT	Homo sapiens SEC14 (S. cerevisiae)-like 2 (SEC14L2), mRNA
81	12758	25241	2.04	1.0E-101	7110714	NT	Homo sapiens SEC14 (S. cerevisiae)-like 2 (SEC14L2), mRNA
715	13336	25822	1.77	1.0E-101	AB007915.2	NT	Homo sapiens mRNA for KIAA0446 protein, partial cds
733	13353	25848	5.29	1.0E-101	7110734	NT	Homo sapiens ventral anterior homeobox 2 (VAX2), mRNA
733	13353	25849	5.29	1.0E-101	7110734	NT	Homo sapiens ventral anterior homeobox 2 (VAX2), mRNA
803	13420	25925	3.37	1.0E-101	7657454	NT	Homo sapiens pescadillo (zebrafish) homolog 1, containing BRC-T domain (PES1), mRNA
896	13500	26018	1.96	1.0E-101	4503914	NT	Homo sapiens phosphoribosylglycinamide formyltransferase, phosphoribosylglycinamide synthetase, phosphoribosylaminimidazole synthetase (GART) mRNA
961	13572	26098	0.88	1.0E-101	Z20656.1	NT	Homo sapiens of cardiac alpha-myosin heavy chain gene
1022	13632	26149	24.99	1.0E-101	BF681218.1	EST_HUMAN	602156474F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4297281 5'
1090	13695	26204	1.58	1.0E-101	AI221878.1	EST_HUMAN	qg99a09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1843336 3'
1782	14372	26917	0.9	1.0E-101	7662183	NT	Homo sapiens KIAA0569 gene product (KIAA0569), mRNA
1782	14372	26918	0.9	1.0E-101	7662183	NT	Homo sapiens KIAA0569 gene product (KIAA0569), mRNA
1998	14570	27132	1.54	1.0E-101	4502998	NT	Homo sapiens carboxypeptidase A1 (pancreatic) (CPA1) mRNA
2101	14680	27248	1.93	1.0E-101	BE843070.1	EST_HUMAN	RC3-S10281-160600-016-H09 S10281 Homo sapiens cDNA
2388	15465	27528	1.24	1.0E-101	5729892	NT	Homo sapiens A kinase (PRKA) anchor protein 6 (AKAP6), mRNA
2648	15205	27778	10.93	1.0E-101	X72693.1	NT	H. sapiens EWS gene, exon 5
2771	15324	27891	2.71	1.0E-101	AJ237744.1	NT	Homo sapiens RIBIR gene (partial), exon 12
2771	15324	27892	2.71	1.0E-101	AJ237744.1	NT	Homo sapiens RIBIR gene (partial), exon 12
2982	15598		10.39	1.0E-101	AJ252312.1	NT	Homo sapiens genomic downstream Rhesus box
3237	15849	28330	2.92	1.0E-101	4885270	NT	Homo sapiens gamma-glutamyltransferase 1 (GGT1) mRNA
3278	15889		2.37	1.0E-101	BF035327.1	EST_HUMAN	601458531F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862086 5'
3427	16035	28515	1.94	1.0E-101	AW965556.1	EST_HUMAN	EST377629 MAGE resequences, MAGI Homo sapiens cDNA
3447	15324	27891	2.93	1.0E-101	AJ237744.1	NT	Homo sapiens RIBIR gene (partial), exon 12
3447	15324	27892	2.93	1.0E-101	AJ237744.1	NT	Homo sapiens RIBIR gene (partial), exon 12
3945	16543	29010	4.29	1.0E-101	AB022785.1	NT	Homo sapiens ASH2L gene, complete cds, similar to Drosophila ash2 gene
5185	17750	30180	1.38	1.0E-101	5921460	NT	Homo sapiens butyrophilin, subfamily 2, member A1 (BTN2A1), mRNA
5185	17750	30181	1.38	1.0E-101	5921460	NT	Homo sapiens butyrophilin, subfamily 2, member A1 (BTN2A1), mRNA
5521	18153	30567	1.26	1.0E-101	AW965139.1	EST_HUMAN	EST377712 MAGE resequences, MAGI Homo sapiens cDNA
6154	18767	31530	3.48	1.0E-101	7427512	NT	Homo sapiens cytoplasmic linker 2 (CYLN2), mRNA
6154	18767	31531	3.48	1.0E-101	7427512	NT	Homo sapiens cytoplasmic linker 2 (CYLN2), mRNA
6796	19387	32203	1.06	1.0E-101	11430734	NT	Homo sapiens carbonic anhydrase VII (CA7), mRNA
7317	19844		1.18	1.0E-101	11545780	NT	Homo sapiens hypothetical protein FLJ22087 (FLJ22087), mRNA
7361	19887	32749	4.87	1.0E-101	AF208870.1	NT	Homo sapiens Kruppel-type zinc finger protein (PEG3) mRNA, alternative splice form 4, partial cds



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7361	19887	32750	4.87	1.0E-101	AF208970.1	NT	Homo sapiens Kruppel-type zinc finger protein (PEG3) mRNA, alternative splice form 4, partial cds
7491	20014	32880	11.89	1.0E-101	AW008475.1	EST_HUMAN	ww5512.x1 NCL CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2533487 3'
7576	20092		1.88	1.0E-101	BE257384.1	EST_HUMAN	601108217F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3349801 5'
7707	20216	33104	7.87	1.0E-101	BF330759.1	EST_HUMAN	RC1-BT0313-220700-018-f12 BT0313 Homo sapiens cDNA
7854	20396	33301	0.98	1.0E-101	BE275821.1	EST_HUMAN	601121621F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3345869 5'
7854	20396	33302	0.98	1.0E-101	BE275821.1	EST_HUMAN	601121621F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3345869 5'
7889	20541	33443	6.69	1.0E-101	BF029174.1	EST_HUMAN	601764688F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3868837 5'
8264	20805	33722	0.66	1.0E-101	AW630070.1	EST_HUMAN	hh74g10.y1 NCL CGAP_GU1 Homo sapiens cDNA clone IMAGE:2868578 5' similar to gb:J03143 INTERFERON-GAMMA RECEPTOR ALPHA CHAIN PRECURSOR (HUMAN);
8264	20805	33723	0.68	1.0E-101	AW630070.1	EST_HUMAN	hh74g10.y1 NCL CGAP_GU1 Homo sapiens cDNA clone IMAGE:2868578 5' similar to gb:J03143 INTERFERON-GAMMA RECEPTOR ALPHA CHAIN PRECURSOR (HUMAN);
8940	21478	34399	1.55	1.0E-101	AA036800.1	EST_HUMAN	zk29g08.l1 Soares_pregnant_uterus_NbhpU Homo sapiens cDNA clone IMAGE:471898 5' similar to
9253	21779	34730	0.8	1.0E-101	AB037772.1	NT	Homo sapiens mRNA for KIAA1351 protein, partial cds
9253	21779	34731	0.8	1.0E-101	AB037772.1	NT	Homo sapiens mRNA for KIAA1351 protein, partial cds
9383	20321	33225	17.2	1.0E-101	X60069.1	NT	Human mRNA for pancreatic gamma-glutamyltransferase
9383	20321	33226	17.2	1.0E-101	X60069.1	NT	Human mRNA for pancreatic gamma-glutamyltransferase
9388	21819	34769	16.05	1.0E-101	9845492	NT	Homo sapiens gamma-glutamyltransferase 1 (GGT1), transcript variant 3, mRNA
9672	22171	35146	12.54	1.0E-101	BE619867.1	EST_HUMAN	601472808T1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3875953 3'
9872	22171	35147	12.54	1.0E-101	BE619867.1	EST_HUMAN	601472808T1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3875953 3'
9808	22306	35290	0.65	1.0E-101	10863960	NT	Homo sapiens potassium channel, subfamily K, member 10 (KCNK10), mRNA
10308	22802	35794	1.71	1.0E-101	11429127	NT	Homo sapiens Janus kinase 2 (a protein tyrosine kinase) (JAK2), mRNA
10337	22831	35825	5.16	1.0E-101	AI570293.1	EST_HUMAN	to77d11.x1 NCL CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2184309 3' similar to gb:M26326 KERATIN, TYPE I CYTOSKELETAL 18 (HUMAN);
10337	22831	35826	5.16	1.0E-101	AI570293.1	EST_HUMAN	to77d11.x1 NCL CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2184309 3' similar to gb:M26326 KERATIN, TYPE I CYTOSKELETAL 18 (HUMAN);
10442	22936	35945	0.85	1.0E-101	BE973648.1	EST_HUMAN	601680825F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:3950887 5'
10442	22936	35946	0.85	1.0E-101	BE973648.1	EST_HUMAN	601680825F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:3950887 5'
10757	23281	36295	1.63	1.0E-101	S38327.1	NT	branched-chain alpha-keto acid dehydrogenase complex E1 alpha subunit [human, Genomic, 195 nt, segment 8 of 9]
10888	23502	36532	1.68	1.0E-101	AB020626.1	NT	Homo sapiens mRNA for KIAA0819 protein, partial cds
11620	24062	37126	18.03	1.0E-101	AA321316.1	EST_HUMAN	EST23783 Bone marrow Homo sapiens cDNA 5' end similar to defensin 1
12274	24478		15.99	1.0E-101	AW939051.1	EST_HUMAN	QV1-DT0068-240200-085-a01 DT0068 Homo sapiens cDNA
43	12722	25183	0.8	1.0E-102	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (pi4K230) mRNA, complete cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
363	13012	25494	4.36	1.0E-102	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
648	13271	25749	1.2	1.0E-102	BE252470.1	EST_HUMAN	601108292F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3344326 5'
807	13424	25930	1.24	1.0E-102	4557534	NT	Homo sapiens down-regulated in adenoma (DRA) mRNA
1156	13759	26269	5.76	1.0E-102	M10976.1	NT	Human endogenous retroviral DNA (4-1), complete retroviral segment
1311	13905	26424	3.09	1.0E-102	11437146	NT	Homo sapiens solute carrier family 2 (facilitated glucose transporter), member 9 (SLC2A9), mRNA
1311	13905	26425	3.09	1.0E-102	11437146	NT	Homo sapiens solute carrier family 2 (facilitated glucose transporter), member 9 (SLC2A9), mRNA
1327	13921	26442	1.92	1.0E-102	4826977	NT	Homo sapiens reelin (RELN) mRNA
1464	14056	26589	164.12	1.0E-102	BE408447.1	EST_HUMAN	601299982F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3629601 5'
2348	14919	27463	1.34	1.0E-102	A1124669.1	EST_HUMAN	am60c10.x1 Johnston frontal cortex Homo sapiens cDNA clone IMAGE:1539954 3' similar to SW:GG95_HUMAN Q08379 GOLGIN-95 ;
2348	14919	27494	1.34	1.0E-102	A1124669.1	EST_HUMAN	am60c10.x1 Johnston frontal cortex Homo sapiens cDNA clone IMAGE:1539954 3' similar to SW:GG95_HUMAN Q08379 GOLGIN-95 ;
3101	15716	28187	1.56	1.0E-102	7661979	NT	Homo sapiens KIAA0187 gene product (KIAA0187), mRNA
3167	15781	28251	4.07	1.0E-102	AU141005.1	EST_HUMAN	AU141005 PLACE4 Homo sapiens cDNA clone PLACE4000650 5'
3187	15781	28252	4.07	1.0E-102	AU141005.1	EST_HUMAN	AU141005 PLACE4 Homo sapiens cDNA clone PLACE4000650 5'
4316	16902	29346	1.84	1.0E-102	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
4503	17087	29535	2.55	1.0E-102	BE251310.1	EST_HUMAN	601107843F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3343882 5'
5287	17849	30275	1.19	1.0E-102	R66488.1	EST_HUMAN	y32c04.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:140934 5'
5574	18205	30856	1.66	1.0E-102	AF067133.1	NT	Homo sapiens protein phosphatase-1 regulatory subunit 7 (PPP1R7) gene, exon 7
5923	18545		4.52	1.0E-102	AB034951.1	NT	Homo sapiens HSC54 mRNA for heat shock cognate protein 54, complete cds
5957	18579	31313	2.43	1.0E-102	7705398	NT	Homo sapiens histone deacetylase 7 (HDAC7), mRNA
5957	18579	31314	2.43	1.0E-102	7705398	NT	Homo sapiens histone deacetylase 7 (HDAC7), mRNA
5962	18584	31318	0.75	1.0E-102	11433046	NT	Homo sapiens hct domain and RLD 2 (HERC2), mRNA
6435	19038	31825	2.89	1.0E-102	A1459825.1	EST_HUMAN	ar82709.x1 Barstead colon HPLRB7 Homo sapiens cDNA clone IMAGE:2151785 3' similar to TR:Q13137 Q13137 NDP52 ;
7190	19722	32570	0.67	1.0E-102	BE729323.1	EST_HUMAN	601561505F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3831241 5'
7217	19748	32604	0.93	1.0E-102	BE386106.1	EST_HUMAN	601277215F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3618243 5'
7392	19917	32781	7.37	1.0E-102	AJ238994.1	NT	Homo sapiens mRNA for Centaurin-alpha2 protein
7620	20133	33010	2.75	1.0E-102	AV710738.1	EST_HUMAN	AV710738 Cu Homo sapiens cDNA clone CUAARD03 5'
8165	20706	33622	3.41	1.0E-102	BE763051.1	EST_HUMAN	QV3-NT0025-210600-236-h08 NT0025 Homo sapiens cDNA
8244	20785	33704	1.5	1.0E-102	BE910555.1	EST_HUMAN	601501107F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3803145 5'
8431	20971	33883	1.65	1.0E-102	AV694817.1	EST_HUMAN	AV694817 GKC Homo sapiens cDNA clone GKCEEE11 5'
8431	20971	33884	1.65	1.0E-102	AV694817.1	EST_HUMAN	AV694817 GKC Homo sapiens cDNA clone GKCEEE11 5'
8539	21078	33997	0.52	1.0E-102	AB007923.1	NT	Homo sapiens mRNA for KIAA0454 protein, partial cds

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8861	21400	34324	0.75	1.0E-102	BE389063.1	EST_HUMAN	601283770F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3605536 5'
8861	21400	34325	0.75	1.0E-102	BE389063.1	EST_HUMAN	601283770F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3605536 5'
9175	21752	34698	0.57	1.0E-102	AI762859.1	EST_HUMAN	wf63b06.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2397971 3' similar to contains MER4.11 MER4 MER4 repetitive element
9205	21722	34666	0.76	1.0E-102	AV755842.1	EST_HUMAN	AV755842 BM Homo sapiens cDNA clone BMFAUD08 5'
9245	21771	34719	2.15	1.0E-102	IT0393.1	EST_HUMAN	yd13d07.r1 Soares fetal liver spleen 1NLS Homo sapiens cDNA clone IMAGE:67021 5'
9245	21771	34720	2.15	1.0E-102	IT0393.1	EST_HUMAN	yd13d07.r1 Soares fetal liver spleen 1NLS Homo sapiens cDNA clone IMAGE:67021 5'
9332	21846	34796	3.3	1.0E-102	AU124629.1	EST_HUMAN	AU124629 NT2RM4 Homo sapiens cDNA clone NT2RM4000309 5'
10284	22779		0.54	1.0E-102	AF153715.1	NT	Homo sapiens phospholipid scramblase 1 gene, exon 1 and 5' flanking region
10365	22859	35851	3.54	1.0E-102	AB05037.1	EST_HUMAN	RC-BT074-260499-014 BT074 Homo sapiens cDNA
10365	22859	35852	3.54	1.0E-102	AB05037.1	EST_HUMAN	RC-BT074-260499-014 BT074 Homo sapiens cDNA
10422	22916	35916	1.58	1.0E-102	AA970788.1	EST_HUMAN	on57h04.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1560823 3' similar to
10949	23464	36486	1.83	1.0E-102	BE897468.1	EST_HUMAN	SW:CAV2_HUMAN P51636 CAVEOLIN-2. [1];
10952	23467	36490	6.26	1.0E-102	4507822	NT	Homo sapiens UDP glycosyltransferase 2 family, polypeptide B11 (UGT2B11) mRNA
10952	23467	36491	6.26	1.0E-102	4507822	NT	Homo sapiens UDP glycosyltransferase 2 family, polypeptide B11 (UGT2B11) mRNA
11200	23705	36756	1.54	1.0E-102	AA868675.1	EST_HUMAN	ak49h10.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1409347 3'
11282	23735	36790	3.6	1.0E-102	BF359243.1	EST_HUMAN	RC8-ET0072-150600-011-F01 ET0072 Homo sapiens cDNA
11555	24003	37076	3.66	1.0E-102	U41302.1	NT	Human chromosome 16 creatine transporter (SLC6A8) and (CDM) paralogous genes, complete cds
11689	24105		8.01	1.0E-102	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
12261	24471	30931	6.87	1.0E-102	AW300862.1	EST_HUMAN	xx07c12.x1 NCI_CGAP_Co20 Homo sapiens cDNA clone IMAGE:2866038 3'
12568	24681		1.79	1.0E-102	U05235.1	NT	Human gamma-glutamyl transpeptidase mRNA, complete cds
73	12751	25229	2.49	1.0E-103	BE908158.1	EST_HUMAN	601500405F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3902305 5'
73	12751	25230	2.49	1.0E-103	BE908158.1	EST_HUMAN	601500405F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3902305 5'
104	12780	25262	8.29	1.0E-103	DB7078.2	NT	Homo sapiens mRNA for KIAA0235 protein, partial cds
222	12883	25368	2.74	1.0E-103	5453783	NT	Homo sapiens nucleolar protein (KKEID repeat) (NOP56) mRNA
1017	13827	26140	0.82	1.0E-103	AJ278348.1	NT	Homo sapiens mRNA for pregnancy-associated plasma protein-E (PAPPE gene)
1286	13881	26406	10.5	1.0E-103	BE977541.1	EST_HUMAN	601485338F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3887876 5'
1840	14232	26768	2.26	1.0E-103	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (pi4K230) mRNA, complete cds
2018	14600	27163	1.43	1.0E-103	4502428	NT	Homo sapiens bone morphogenetic protein 8 (osteogenic protein 2) (BMP8) mRNA
2018	14600	27164	1.43	1.0E-103	4502428	NT	Homo sapiens bone morphogenetic protein 8 (osteogenic protein 2) (BMP8) mRNA
2343	14914	27488	1	1.0E-103	AU134991.1	EST_HUMAN	AU134991 PLACE1 Homo sapiens cDNA clone PLACE1000965 5'
2494	15058	27632	1.88	1.0E-103	AF060568.1	NT	Homo sapiens promyelocytic leukemia zinc finger protein (PLZF) gene, complete cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2631	15192	27762	1.54	1.0E-103	BF528379.1	EST_HUMAN	602041882F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4179429 5'
2631	15192	27763	1.54	1.0E-103	BF528379.1	EST_HUMAN	602041882F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4179429 5'
3105	15720		2.9	1.0E-103	BE744722.1	EST_HUMAN	601573113F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3834315 5'
3428	16034	28514	3.71	1.0E-103	AW298245.1	EST_HUMAN	U1H-BW0-ajh-h-11-0-U1.s1 NCI_CGAP_Sub6 Homo sapiens cDNA clone IMAGE:2733165 3'
3487	16092	28584	1.19	1.0E-103	AB040892.1	NT	Homo sapiens mRNA for KIAA1459 protein, partial cds
3818	16418		6.77	1.0E-103	AF023861.1	NT	Maceca mulatta cyclophilin A mRNA, complete cds
3861	16459	28923	1.17	1.0E-103	AA485663.1	EST_HUMAN	ab10d12.s1 Strategene lung (#837210) Homo sapiens cDNA clone IMAGE:840407 3' similar to contains element LTR10 repetitive element
4075	16871	29132	3.62	1.0E-103	TZ3683.1	EST_HUMAN	seq340 b4HB3MA-Cot109+10-Bio Homo sapiens cDNA clone b4HB3MA-Cot109+10-Bio-7 3'
4946	17521	29863	0.68	1.0E-103	BE900203.1	EST_HUMAN	601673135F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3955953 5'
6091	18707	31455	0.73	1.0E-103	BF569527.1	EST_HUMAN	602186023F1 NIH_MGC_45 Homo sapiens cDNA clone IMAGE:4310573 5'
6097	18713	31463	1.8	1.0E-103	AF179955.1	NT	Homo sapiens septin 2 (SEP2) mRNA, partial cds
6413	19016	31798	0.71	1.0E-103	11435053	NT	Homo sapiens KIAA0440 protein (KIAA0440), mRNA
6413	19016	31799	0.71	1.0E-103	11435053	NT	Homo sapiens KIAA0440 protein (KIAA0440), mRNA
6567	19184	31985	0.76	1.0E-103	AW954566.1	EST_HUMAN	EST366636 IMAGE resequences, MAGC Homo sapiens cDNA
6567	19184	31986	0.76	1.0E-103	AW954566.1	EST_HUMAN	EST366636 IMAGE resequences, MAGC Homo sapiens cDNA
6707	24767	32106	1.16	1.0E-103	AA781442.1	EST_HUMAN	q26603.s1 Soares_testis_NHT Homo sapiens cDNA clone 1391452 3'
6743	19337	32142	0.86	1.0E-103	AF053490.1	NT	Homo sapiens glycine receptor alpha 2 subunit (GLRA2) gene, exon 4
6819	19409	32227	1.69	1.0E-103	AI590071.1	EST_HUMAN	tm58b05.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2162289 3' similar to TR:Q13769 Q13769 ANONYMOUS
6819	19409	32228	1.69	1.0E-103	AI590071.1	EST_HUMAN	tm58b05.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2162289 3' similar to TR:Q13769 Q13769 ANONYMOUS
6933	18041	30484	1.67	1.0E-103	5032282	NT	Homo sapiens dystrophin (muscular dystrophy, Duchenne and Becker types), includes DXS142, DXS164, DXS206, DXS230, DXS239, DXS268, DXS269, DXS270, DXS272 (DMD), transcript variant Dp427m, mRNA
6933	18041	30485	1.67	1.0E-103	5032282	NT	Homo sapiens dystrophin (muscular dystrophy, Duchenne and Becker types), includes DXS142, DXS164, DXS206, DXS230, DXS239, DXS268, DXS269, DXS270, DXS272 (DMD), transcript variant Dp427m, mRNA
7047	18067	30457	1.07	1.0E-103	11431100	NT	Homo sapiens ribosomal protein L3-like (RPL3L), mRNA
7101	19671	32510	1.13	1.0E-103	AJ289880.1	NT	Homo sapiens KIAA0951 gene (partial), X13 gene and LZTFL1 gene
7278	19806	32665	1.34	1.0E-103	AW865776.1	EST_HUMAN	EST377849 IMAGE resequences, MAGI Homo sapiens cDNA
7372	19898	32759	3.38	1.0E-103	BE748158.1	EST_HUMAN	601571537F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:3838545 5'
7749	20257	33152	4.44	1.0E-103	AI590071.1	EST_HUMAN	tm58b05.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2162289 3' similar to TR:Q13769 Q13769 ANONYMOUS

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7749	20257	33153	4.44	1.0E-103	AI590071.1	EST_HUMAN	hm58005.x1 NCI_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2162289 3' similar to TR:Q13769
8556	21095	34015	1.14	1.0E-103	AU140344.1	EST_HUMAN	Q13769 ANONYMOUS.
8556	21095	34016	1.14	1.0E-103	AU140344.1	EST_HUMAN	AU140344 PLACE2 Homo sapiens cDNA clone PLACE2000374 5'
8637	21176	34095	1.13	1.0E-103	BF109244.1	EST_HUMAN	AU140344 PLACE2 Homo sapiens cDNA clone PLACE2000374 5'
9036	21573	34502	2.82	1.0E-103	6005921	NT	7160503.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3525984 3' similar to SW:PTNF_HUMAN Q16825 PROTEIN-TYROSINE PHOSPHATASE D1;
9036	21573	34503	2.82	1.0E-103	6005921	NT	Homo sapiens triple functional domain (PTPRF interacting) (TRIO), mRNA
9075	21612	34544	1.06	1.0E-103	AA581086.1	EST_HUMAN	Homo sapiens triple functional domain (PTPRF interacting) (TRIO), mRNA
9117	21653	34594	1.29	1.0E-103	AA774980.1	EST_HUMAN	nd13602.s1 NCI_CGAP_Ov1 Homo sapiens cDNA clone IMAGE:800182 3' similar to gb:U02426 26S
9970	22485	35449	1.55	1.0E-103	AZ77976.1	NT	ae84d12.s1 Strategene schizo brain S11 Homo sapiens cDNA clone IMAGE:970871 3' similar to gb:X03747 cds1 SODIUM/POTASSIUM-TRANSPORTING ATPASE BETA-1 (HUMAN);
10011	22506	35497	1.64	1.0E-103	AW963676.1	EST_HUMAN	H. sapiens mRNA for latent transforming growth factor-beta binding protein (LTBP-2)
10137	22632	35621	9.06	1.0E-103	AI878956.1	EST_HUMAN	EST375749 MAGE resequences, MAGH Homo sapiens cDNA
10521	23059	36069	2.78	1.0E-103	BE549706.1	EST_HUMAN	au51904.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2518326 5' similar to TR:O15046 O15046 KIAA0338;
10612	23145	36156	3.46	1.0E-103	AI792759.1	EST_HUMAN	7b41103.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3230813 3' similar to gb:M69043 MAJOR HISTOCOMPATIBILITY COMPLEX ENHANCER-BINDING PROTEIN (HUMAN);
10713	23241	36257	2.21	1.0E-103	11424081	NT	q02d06.y6 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1522283 5' similar to TR:Q62084 Q62084
10724	23251	36266	3.66	1.0E-103	AF149773.1	NT	PHOSPHOLIPASE C NEIGHBORING;
10724	23251	36287	3.66	1.0E-103	AF149773.1	NT	Homo sapiens AXL receptor tyrosine kinase (AXL), mRNA
11253	23783	36839	2.51	1.0E-103	AU136283.1	EST_HUMAN	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
11320	23018	36027	5.36	1.0E-103	L43610.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
11590	24033	37103	4.38	1.0E-103	BE644611.1	EST_HUMAN	AU136283 PLACE1 Homo sapiens cDNA clone PLACE1003923 5'
11694	24101		2.23	1.0E-103	AF224669.1	NT	Homo sapiens polycystic kidney disease (PKD1) gene, exons 27-30
11717	24126		1.91	1.0E-103	11526291	NT	7e68a10.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3287610 3' similar to contains MER29.13 MER29 repetitive element;
11916	24254	31010	2.99	1.0E-103	AB011399.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds.
254	12914	25398	4.81	1.0E-104	AL037549.3	EST_HUMAN	Homo sapiens hypothetical protein FLJ20454 (FLJ20454), mRNA
254	12914	25399	4.81	1.0E-104	AL037549.3	EST_HUMAN	Homo sapiens gene for AF-6, complete cds
							DKFZp564H1072_1 584 (synonym: hfr2) Homo sapiens cDNA clone DKFZp564H1072 5'
							DKFZp564H1072_1 584 (synonym: hfr2) Homo sapiens cDNA clone DKFZp564H1072 5'

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1932	14516	27072	2.06	1.0E-104	4502428	NT	Homo sapiens bone morphogenetic protein 8 (osteogenic protein 2) (BMP8) mRNA
2235	14810	27382	2.22	1.0E-104	AA132975.1	EST_HUMAN	z022c06.s1 Stragelene colon (#837204) Homo sapiens cDNA clone IMAGE:587626 3' similar to gb:Z14116.ma1 CD59 GLYCOPROTEIN PRECURSOR (HUMAN);
2245	14819	27394	1.47	1.0E-104	BE744628.1	EST_HUMAN	601577460.F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3928438 5'
2407	14975	27548	0.89	1.0E-104	BF334221.1	EST_HUMAN	RC1-CT0249-110900-214-F12 CT0249 Homo sapiens cDNA
2407	14975	27549	0.89	1.0E-104	BF334221.1	EST_HUMAN	RC1-CT0249-110900-214-F12 CT0249 Homo sapiens cDNA
2481	15047	27616	1.28	1.0E-104	5031570	NT	Homo sapiens ARP2 (actin-related protein 2, yeast) homolog (ACTR2), mRNA
2898	15513	27883	8.17	1.0E-104	M34671.1	NT	Homo lymphocytic antigen CD59/MEM43 mRNA, complete cds
2941	15557		3.21	1.0E-104	Y11151.1	NT	H sapiens gene encoding phenylpyruvate tautomerase II
3438	16046		1.77	1.0E-104	AA319436.1	EST_HUMAN	EST21658 Adrenal gland tumor Homo sapiens cDNA 5' end
3661	16263	28735	0.63	1.0E-104	AB033102.1	NT	Homo sapiens mRNA for KIAA1276 protein, partial cds
3661	16263	28736	0.63	1.0E-104	AB033102.1	NT	Homo sapiens mRNA for KIAA1276 protein, partial cds
4015	16613	29088	1.2	1.0E-104	AB032998.1	NT	Homo sapiens mRNA for KIAA1172 protein, partial cds
4210	16769	29248	0.62	1.0E-104	F11745.1	EST_HUMAN	HSC31A071 normalized infant brain cDNA Homo sapiens cDNA clone c-31a07
4468	17052	29498	6.67	1.0E-104	X02761.1	NT	Human mRNA for fibronectin (FN precursor)
4715	17286	29740	1.28	1.0E-104	AF231920.1	NT	Homo sapiens chromosome 21 unknown mRNA
4715	17286	29741	1.28	1.0E-104	AF231920.1	NT	Homo sapiens chromosome 21 unknown mRNA
5330	17891	30305	1.84	1.0E-104	4502452	NT	Homo sapiens apolipoprotein B (including Ag(x) antigen) (APOB) mRNA
6095	18711	31459	1.18	1.0E-104	U43379.1	NT	Human Down Syndrome region of chromosome 21 DNA
6095	18711	31460	1.18	1.0E-104	U43379.1	NT	Human Down Syndrome region of chromosome 21 DNA
6139	18753	31511	0.98	1.0E-104	AB017332.1	NT	Homo sapiens alk3 mRNA for Aurora/Plt1-related kinase 3, complete cds
6593	19190	31993	8.25	1.0E-104	A1768797.1	EST_HUMAN	wj03b12.x1 NCI CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2401727 3' similar to TR:Q14145 Q14145
6593	19190	31994	8.25	1.0E-104	A1768797.1	EST_HUMAN	KIAA0132 PROTEIN, contains element L TR7 repetitive element ;
6756	19349	32158	1.07	1.0E-104	7706512	NT	KIAA0132 PROTEIN, contains element L TR7 repetitive element ;
6895	19629	32465	1.48	1.0E-104	BE314182.1	EST_HUMAN	Homo sapiens PDZ domain-containing guanine nucleotide exchange factor 1 (LOC51735), mRNA
6895	19629	32466	1.48	1.0E-104	BE314182.1	EST_HUMAN	601150451.F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3503220 5'
7276	19804	32663	2.22	1.0E-104	11425572	NT	Homo sapiens adaptor-related protein complex 2, beta 1 subunit (AP2B1), mRNA
8533	21072	33992	0.71	1.0E-104	BF509244.1	EST_HUMAN	U1-H-B14-80w-b-09-Q-U1.st NCI CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3086176 3'
9094	21630	34568	2.59	1.0E-104	BF448230.1	EST_HUMAN	ncd16g11.x1 NCI CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3365948 3'
9187	21704	34646	0.6	1.0E-104	AA682308.1	EST_HUMAN	z198b05.st Soares fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:462897 3'
9208	21725		1.62	1.0E-104	T74219.1	EST_HUMAN	yc83f02.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:22440 5'
9238	21764	34710	4.74	1.0E-104	AF091395.1	NT	Homo sapiens T10 isoform mRNA, complete cds

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9238	21764	34711	4.74	1.0E-104	AF091395.1	NT	Homo sapiens Tiro isofom mRNA, complete cds
9362	20301	33201	4.6	1.0E-104	BF352841.1	EST_HUMAN	IL3-H10619-080900-249-F07 HT0618 Homo sapiens cDNA
9362	20301	33202	4.6	1.0E-104	BF352841.1	EST_HUMAN	IL3-H10619-080900-249-F07 HT0618 Homo sapiens cDNA
9668	22167	35142	0.69	1.0E-104	AW103848.1	EST_HUMAN	xd76d02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2603523 3' similar to TR:Q24116
9668	22167	35143	0.69	1.0E-104	AW103848.1	EST_HUMAN	xd76d02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2603523 3' similar to TR:Q24116
9858	22355	35338	0.54	1.0E-104	AF113514.1	NT	Homo sapiens histone acetyltransferase MORF mRNA, complete cds
10005	22500	35490	3.86	1.0E-104	BE791713.1	EST_HUMAN	601581503F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3835977 5'
10005	22500	35491	3.86	1.0E-104	BE791713.1	EST_HUMAN	601581503F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3835977 5'
10289	22783	35783	1.05	1.0E-104	AV728070.1	EST_HUMAN	AV728070 HTC Homo sapiens cDNA clone HTCBYA07 5'
10338	22832	35827	4.98	1.0E-104	AJ130765.1	EST_HUMAN	AJ130765 NT2RP3 Homo sapiens cDNA clone NT2RP3001398 5'
10445	22839	35949	3.94	1.0E-104	U68355.1	NT	Human beta4-integrin (ITGB4) gene, exons 19,20,21,22,23,24 and 25
10457	22851		1.04	1.0E-104	11427757	NT	Homo sapiens KIAA0649 gene product (KIAA0649), mRNA
11176	23683	38728	2.44	1.0E-104	BE720191.1	EST_HUMAN	RC0-HT0885-310700-021-b09 HT0885 Homo sapiens cDNA
11176	23683	38729	2.44	1.0E-104	BE720191.1	EST_HUMAN	RC0-HT0885-310700-021-b09 HT0885 Homo sapiens cDNA
11208	23712	38766	5.34	1.0E-104	BF684288.1	EST_HUMAN	60214121F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4302507 5'
12538	24648		2.58	1.0E-104	BE393892.1	EST_HUMAN	601312181F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3658876 5'
300	15384	25445	2.78	1.0E-105	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
450	12679	25135	15.84	1.0E-105	4505150	NT	Homo sapiens Meis1 (mouse) homeolog (MEIS1) mRNA
620	13247	25720	5.78	1.0E-105	AF032897.1	NT	Homo sapiens potassium channel subunit (HERG-3) mRNA, complete cds
620	13247	25721	5.78	1.0E-105	AF032897.1	NT	Homo sapiens potassium channel subunit (HERG-3) mRNA, complete cds
1719	14311		1.84	1.0E-105	AB020981.1	NT	Homo sapiens mRNA for cyclin B2, complete cds
1859	14447	27004	1.35	1.0E-105	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
1970	14554	27110	1.24	1.0E-105	D50918.1	NT	Human mRNA for KIAA0128 gene, partial cds
2231	14806	27379	1.36	1.0E-105	AA318369.1	EST_HUMAN	EST20609 Spleen I Homo sapiens cDNA 5' end similar to autoimmune antigen Ku, p70/p80 subunit
2747	15302		1.43	1.0E-105	AA584808.1	EST_HUMAN	no10d05.s1 NCL_CGAP_Phe1 Homo sapiens cDNA clone IMAGE:110285 3'
3039	15655		3.35	1.0E-105	AJ229041.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 1/3
3394	18002	28482	0.72	1.0E-105	7304922	NT	Homo sapiens bromodomain adjacent to zinc finger domain, 2B (BAZ2B), mRNA
3394	18002	28483	0.72	1.0E-105	7304922	NT	Homo sapiens bromodomain adjacent to zinc finger domain, 2B (BAZ2B), mRNA
4173	18764	29212	2.65	1.0E-105	AW961688.1	EST_HUMAN	EST1373761 MAGG resequences, MAGG Homo sapiens cDNA
4853	17431	29881	0.65	1.0E-105	BE868881.1	EST_HUMAN	601445823F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3850158 5'
4853	17431	29882	0.65	1.0E-105	BE868881.1	EST_HUMAN	601445823F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3850158 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4874	17449	29600	1.06	1.0E-105	AA698335.1	EST_HUMAN	z144g02.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:433682 3'
5073	17846		4.94	1.0E-105	AL163208.2	NT	Homo sapiens chromosome 21 segment HS21C008
5533	18165	30579	0.97	1.0E-105	AF016704.1	NT	Homo sapiens E6-AP ubiquitin-protein ligase (UBE3A) gene, exon 2
5594	18224		1.12	1.0E-105	11420134	NT	Homo sapiens Retina-derived POU-domain factor-1 (RPF-1), mRNA
6885	19483	32303	1.68	1.0E-105	BF314302.1	EST_HUMAN	601901028F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4130334 5'
6885	19483	32304	1.68	1.0E-105	BF314302.1	EST_HUMAN	601901028F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4130334 5'
7058	18077	30430	3.65	1.0E-105	11419196	NT	Homo sapiens GTPase activating protein-like (GAPL), mRNA
7058	18077	30431	3.65	1.0E-105	11419198	NT	Homo sapiens GTPase activating protein-like (GAPL), mRNA
7328	19855	32718	1.09	1.0E-105	BE902816.1	EST_HUMAN	60187279F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3960019 5'
7800	20343	33252	0.87	1.0E-105	X12558.1	NT	Human mRNA for dbi proto-oncogene
7971	20513	33420	5.86	1.0E-105	T05087.1	EST_HUMAN	EST02975 Fetal brain, Strategene (cat#636206) Homo sapiens cDNA clone HFBCR32
8337	20878	33799	1.43	1.0E-105	AW007194.1	EST_HUMAN	ws50c10.x1 NCI CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2500626 3' similar to
8858	21397	34320	0.75	1.0E-105	AW840817.1	EST_HUMAN	SW:ACSA_PENCH P36333 ACETYL-COENZYME A SYNTHETASE ;
8880	21518	34444	2.92	1.0E-105	AW016879.1	EST_HUMAN	RC1-CN0008-070100-011-405 CN0008 Homo sapiens cDNA
9131	21866	34806	0.87	1.0E-105	AW882372.1	EST_HUMAN	UI-H-B10p-abi-b-12-0-UI.s1 NCI CGAP_Sub2 Homo sapiens cDNA clone IMAGE:2711782 3'
9131	21866	34807	0.87	1.0E-105	AW882372.1	EST_HUMAN	QV2-OT0082-140300-083-009 OT0082 Homo sapiens cDNA
9487	21944	34891	1.07	1.0E-105	BE887793.1	EST_HUMAN	QV2-OT0082-140300-083-009 OT0082 Homo sapiens cDNA
9487	21944	34892	1.07	1.0E-105	BE887793.1	EST_HUMAN	601443755F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3847884 5'
10812	23334	36347	6.07	1.0E-105	AF254822.1	NT	601443755F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3847884 5'
11109	23619	36860	2.15	1.0E-105	D63548.1	NT	Homo sapiens SMARCA4 isoform (SMARCA4) gene, complete cds, alternatively spliced
11161	23668	36713	2.07	1.0E-105	7705936	NT	Homo sapiens COL4A6 gene for $\alpha 6(V)$ collagen, exon 31
11457	23907	36974	2.56	1.0E-105	AW027554.1	EST_HUMAN	Homo sapiens Ran binding protein 11 (LOC51194), mRNA
11524	23972	37042	1.62	1.0E-105	BF430921.1	EST_HUMAN	ww7407.x1 Soares_thymus_NHFT Homo sapiens cDNA clone IMAGE:2535301 3' similar to TR:P87892
13	12692	25148	2.29	1.0E-106	AI904483.1	EST_HUMAN	P87892 PROTEASE ;
162	12825	25368	1.55	1.0E-106	AW503208.1	EST_HUMAN	7018c10.x1 NCI CGAP_Kld11 Homo sapiens cDNA clone IMAGE:3574291 3' similar to TR:P97680 P97680
219	12880	25733	1.75	1.0E-106	AI565065.1	EST_HUMAN	RIN1 ;
567	13198	25733	1.82	1.0E-106	AW985556.1	EST_HUMAN	IL-BT057-281198-001 BT057 Homo sapiens cDNA
633	13258	25733	2.3	1.0E-106	J00146.1	NT	UI-HF-BN0-akt-g-07-0-UI.s1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3076348 5'
634	13258	25733	3.03	1.0E-106	J00146.1	NT	lg79c01.x1 NCI CGAP_U11 Homo sapiens cDNA clone IMAGE:2215008 3'
1572	14165	26898	1.57	1.0E-106	AF145712.1	NT	EST1377629 MAGC resequences, MAGI Homo sapiens cDNA
1739	14329	26873	4.72	1.0E-106	U48724.1	NT	Human dihydrofolate reductase pseudogene (psi-hd1)
							Human dihydrofolate reductase pseudogene (psi-hd1)
							Homo sapiens soluble neuropilin-1 mRNA, complete cds
							Human epidermal growth factor receptor (EGFR) precursor-mRNA, exon 4, partial cds



Table 4

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1757	14347	26892	0.89	1.0E-106	U04510.1	NT	Homo sapiens type IV collagen alpha 5 chain (COL4A5) gene, exon 41
1839	14427	26978	5.32	1.0E-106	AA527446.1	EST_HUMAN	ng41c05.s1 NCI_CGAP_C03 Homo sapiens cDNA clone IMAGE:937352 3' similar to contains element LTR3 repetitive element:
1839	14427	26979	5.32	1.0E-106	AA527446.1	EST_HUMAN	ng41c05.s1 NCI_CGAP_C03 Homo sapiens cDNA clone IMAGE:937352 3' similar to contains element LTR3 repetitive element:
2167	14744	27313	2.48	1.0E-106	BE144286.1	EST_HUMAN	MRO-HT0165-140200-008-d10 HT0165 Homo sapiens cDNA
2356	14927	27501	3.35	1.0E-106	4504184	NT	Homo sapiens glutathione S-transferase theta 1 (GSTT1), mRNA
2636	15196	27769	1.49	1.0E-106	BE260201.1	EST_HUMAN	601149783F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3502461 5'
2788	15339	27910	6.69	1.0E-106	AJ276526.1	EST_HUMAN	q176h10.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1878307 3'
2852	14071	26609	1.52	1.0E-106	4504184	NT	Homo sapiens glutathione S-transferase theta 1 (GSTT1), mRNA
2852	14071	26610	1.52	1.0E-106	4504184	NT	Homo sapiens glutathione S-transferase theta 1 (GSTT1), mRNA
2899	15516	27985	0.98	1.0E-106	BE384286.1	EST_HUMAN	601272675F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3613818 5'
2968	15583	28064	6.37	1.0E-106	AB037747.1	NT	Homo sapiens mRNA for KIAA1326 protein, partial cds
2968	15583	28064	6.37	1.0E-106	AB037747.1	NT	Homo sapiens mRNA for KIAA1326 protein, partial cds
3214	15826	28303	2.04	1.0E-106	8922965	NT	Homo sapiens hypothetical protein FLJ11273 (FLJ11273), mRNA
3214	15826	28304	2.04	1.0E-106	8922965	NT	Homo sapiens hypothetical protein FLJ11273 (FLJ11273), mRNA
3420	16026	28509	0.72	1.0E-106	AB008681.1	NT	Homo sapiens gene for activin receptor type IIB, complete cds
3488	16093	28585	1.14	1.0E-106	AB033104.1	NT	Homo sapiens mRNA for KIAA1278 protein, partial cds
3488	16093	28586	1.14	1.0E-106	AB033104.1	NT	Homo sapiens mRNA for KIAA1278 protein, partial cds
4111	16705	29158	9.08	1.0E-106	AW974650.1	EST_HUMAN	EST386875 MAGC resequences, MAGN Homo sapiens cDNA
4111	16705	29159	9.08	1.0E-106	AW974650.1	EST_HUMAN	EST386875 MAGC resequences, MAGN Homo sapiens cDNA
4706	17288	29732	1.47	1.0E-106	BE144286.1	EST_HUMAN	MRO-HT0165-140200-008-d10 HT0165 Homo sapiens cDNA
5438	17683	30399	8.5	1.0E-106	S67479.1	NT	(GC)IS=vitamin D-binding protein/group specific component [human, peripheral blood leukocytes, Genomic, 2126 nt, segment 5 of 9]
5572	18203	30653	2.76	1.0E-106	AA781155.1	EST_HUMAN	q24b08.s1 Soares_testis_NHT Homo sapiens cDNA clone 1391225 3' similar to gb:X12433 PROTEIN PHPS1-2 (HUMAN);
6017	18636	31375	0.67	1.0E-106	AU130113.1	EST_HUMAN	AU130113 NT2RP3 Homo sapiens cDNA clone NT2RP3000274 5'
6017	18636	31376	0.67	1.0E-106	AU130113.1	EST_HUMAN	AU130113 NT2RP3 Homo sapiens cDNA clone NT2RP3000274 5'
6145	18759	31517	0.82	1.0E-106	AU143428.1	EST_HUMAN	AU143428 Y79AA1 Homo sapiens cDNA clone Y79AA1001912 5'
6145	18759	31518	0.82	1.0E-106	AU143428.1	EST_HUMAN	AU143428 Y79AA1 Homo sapiens cDNA clone Y79AA1001912 5'
6250	18859	31631	13.05	1.0E-106	BF679574.1	EST_HUMAN	602154012F1 NIH_MGC_93 Homo sapiens cDNA clone IMAGE:4285087 5'
6355	18960	31738	0.68	1.0E-106	BE897112.1	EST_HUMAN	601439670F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3924641 5'
6551	19149	31945	19.14	1.0E-106	11545913	NT	Homo sapiens xylosyltransferase II (XT2), mRNA
6551	19149	31946	19.14	1.0E-106	11545913	NT	Homo sapiens xylosyltransferase II (XT2), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7406	19931	32795	5.83	1.0E-106	AA663779.1	EST_HUMAN	aa72e07.s1 Striatogene schizo brain S11 Homo sapiens cDNA clone IMAGE:969732 3' similar to gb:X65873 KINESIN HEAVY CHAIN (HUMAN);
7453	19877	32842	4.92	1.0E-106	11429617	NT	Homo sapiens XPMC2 protein (LOC57109). mRNA
7514	20035	32901	1.23	1.0E-106	BE292722.1	EST_HUMAN	601105736F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2988345 5'
7606	20119	32995	8.75	1.0E-106	11425503	NT	Homo sapiens sorting nexin 11 (SNX11). mRNA
7606	20119	32996	8.75	1.0E-106	11425503	NT	Homo sapiens sorting nexin 11 (SNX11). mRNA
7769	20277	33175	0.72	1.0E-106	AW163047.1	EST_HUMAN	au91f05.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2783649 5' similar to TR:O75834 O75834 CULLIN-4A;
7926	20468	33376	5.97	1.0E-106	BE741408.1	EST_HUMAN	601594331F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3948463 5'
7926	20468	33377	5.97	1.0E-106	BE741408.1	EST_HUMAN	601594331F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3948463 5'
8115	20858	33565	13.65	1.0E-106	A1523066.1	EST_HUMAN	ar88a07.x1 Barstead aorta HPLRB6 Homo sapiens cDNA clone IMAGE:2127732 3' similar to gb:X06233 CALGRANULIN B (HUMAN);
8564	21103	34022	0.74	1.0E-106	BE387950.1	EST_HUMAN	601282717F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3604483 5'
8564	21103	34023	0.74	1.0E-106	BE387950.1	EST_HUMAN	601282717F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3604483 5'
8640	21179	34099	3.9	1.0E-106	A1654123.1	EST_HUMAN	IV62a05.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2283632 3' similar to SW:ICAG_HUMAN Q05084.69 KD ISLET CELL AUTOANTIGEN;
8645	21184	34103	0.54	1.0E-106	A1691109.1	EST_HUMAN	wu38c03.x1 Soares Dieckgrafe colon NHCD Homo sapiens cDNA clone IMAGE:2522308 3' similar to TR:O70273 O70273 ETS HOMOLOGOUS FACTOR;
8982	21520	34446	0.56	1.0E-106	AW839831.1	EST_HUMAN	GM4-LT0059-150200-096-e08 LT0059 Homo sapiens cDNA
9074	21611	34542	2	1.0E-106	AA825307.1	EST_HUMAN	cc67e08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1354790 3'
9074	21611	34543	2	1.0E-106	AA825307.1	EST_HUMAN	cc67e08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1354790 3'
9210	21727	34670	2.03	1.0E-106	A1750447.1	EST_HUMAN	cn03a04.y1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBC_cn03a04 random
9350	21864	34814	1.46	1.0E-106	A1479569.1	EST_HUMAN	tm41f02.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2160699 3' similar to contains MSR1.13 TAR1 PTR5 repetitive element;
9350	21864	34815	1.46	1.0E-106	A1479569.1	EST_HUMAN	tm41f02.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2160699 3' similar to contains MSR1.13 TAR1 PTR5 repetitive element;
9513	22408	35385	1.35	1.0E-106	BE389234.1	EST_HUMAN	601282367F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3604217 5'
9896	22491	35479	1.47	1.0E-106	BF027310.1	EST_HUMAN	601671674F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3954403 5'
9896	22491	35480	1.47	1.0E-106	BF027310.1	EST_HUMAN	601671674F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3954403 5'
10139	22634	35624	8.16	1.0E-106	AA604417.1	EST_HUMAN	np57b10.s1 NCI_CGAP_Br2 Homo sapiens cDNA clone IMAGE:1130395 3'
10139	22634	35625	8.16	1.0E-106	AA604417.1	EST_HUMAN	np57b10.s1 NCI_CGAP_Br2 Homo sapiens cDNA clone IMAGE:1130395 3'
10185	22680	35672	1.56	1.0E-106	AW363299.1	EST_HUMAN	RC0-CT0318-201199-031-a11 CT0318 Homo sapiens cDNA
10190	22685	35677	0.77	1.0E-106	11436432	NT	Homo sapiens multimerin (MMRN). mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10190	22885	35878	0.77	1.0E-108	11438432	NT	Homo sapiens multimarin (MMRN), mRNA
10358	22852	35846	0.45	1.0E-106	AL039886.1	EST_HUMAN	DKFZp434F0712_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434F0712 5'
10472	22868	35978	3.31	1.0E-108	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
10775	23289	36304	6.85	1.0E-103	BF032755.1	EST_HUMAN	601453461F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3857386 5'
10775	23289	36305	6.85	1.0E-106	BF032755.1	EST_HUMAN	601453461F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3857386 5'
10941	23457	36480	2.93	1.0E-108	J05200.1	NT	Human ryanodine receptor mRNA, complete cds
10941	23457	36481	2.93	1.0E-106	J05200.1	NT	Human ryanodine receptor mRNA, complete cds
11288	23739	36795	1.87	1.0E-108	BE257385.1	EST_HUMAN	601109219F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3348987 5'
11418	23869	36929	1.83	1.0E-106	BE010882.1	EST_HUMAN	RC5-BN0192-100500-021-B02 BN0192 Homo sapiens cDNA
11418	23869	36930	1.83	1.0E-106	BE010882.1	EST_HUMAN	RC5-BN0192-100500-021-B02 BN0192 Homo sapiens cDNA
11762	24887		5.89	1.0E-108	AW410405.1	EST_HUMAN	h05h11.x1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2861844 5'
11991	24301	30986	4.03	1.0E-106	BE894488.1	EST_HUMAN	601433087F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3918524 5'
11991	24301	30987	4.03	1.0E-108	BE894488.1	EST_HUMAN	601433087F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3918524 5'
12216	24439		3.44	1.0E-106	BE695905.1	EST_HUMAN	RC1-CT0249-090800-024-005 CT0249 Homo sapiens cDNA
255	12915		2.78	1.0E-107	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
288	12942		1.25	1.0E-107	X60459.1	NT	Human IFNAR gene for interferon alpha/beta receptor
658	13281	25761	1.82	1.0E-107	AF155103.1	NT	Homo sapiens NY-REN-25 antigen mRNA, partial cds
848	13462	25970	1.45	1.0E-107	X60459.1	NT	Human IFNAR gene for interferon alpha/beta receptor
919	13532	26050	2.27	1.0E-107	X60459.1	NT	Human IFNAR gene for interferon alpha/beta receptor
1004	13615	26129	8.14	1.0E-107	AF154121.1	NT	Homo sapiens sodium-dependent high-affinity dicarboxylate transporter (NADC3) mRNA, complete cds
1321	13915	26437	1.33	1.0E-107	AB032253.1	NT	Homo sapiens BAZ1B mRNA for bromodomain adjacent to zinc finger domain 1B, complete cds
1615	14208	26741	2.61	1.0E-107	BF087405.1	EST_HUMAN	QV2-HT0540-120900-358-005 HT0540 Homo sapiens cDNA
1788	14378	26922	2.7	1.0E-107	AF136275.1	NT	Homo sapiens cathepsin Z precursor (CTS2) gene, exon 3
1880	14468	27023	0.89	1.0E-107	AB007822.2	NT	Homo sapiens mRNA for KIAA0453 protein, partial cds
1880	14468	27024	0.89	1.0E-107	AB007822.2	NT	Homo sapiens mRNA for KIAA0453 protein, partial cds
2249	14823	27399	1.17	1.0E-107	U13729.1	NT	Human dipeptidyl peptidase IV (CD26) gene, exon 20
2400	14968	27541	0.94	1.0E-107	AW842451.1	EST_HUMAN	PM1-CHN0031-190100-001-003 CN0031 Homo sapiens cDNA
2400	14968	27542	0.94	1.0E-107	AW842451.1	EST_HUMAN	PM1-CHN0031-190100-001-003 CN0031 Homo sapiens cDNA
2572	15135	27706	5.5	1.0E-107	BE732460.1	EST_HUMAN	601567619F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3842308 5'
2572	15135	27707	5.5	1.0E-107	BE732460.1	EST_HUMAN	601567619F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3842308 5'
3040	15656	28135	3.03	1.0E-107	AW842451.1	EST_HUMAN	PM1-CHN0031-190100-001-003 CN0031 Homo sapiens cDNA
3040	15656	28136	3.03	1.0E-107	AW842451.1	EST_HUMAN	PM1-CHN0031-190100-001-003 CN0031 Homo sapiens cDNA
3134	15748	28217	3.02	1.0E-107	5902097	NT	Homo sapiens SMT3 (suppressor of mit two 3, yeast) homolog 2 (SMT3H2), mRNA

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3898	16497	28959	4.68	1.0E-107	AF020671.1	NT	Homo sapiens myotubularin (MTM1) gene, exon 9
3972	16570	29039	1.69	1.0E-107	M19816.1	NT	Human apolipoprotein B-100 (apoB) gene, exon 10
3972	16570	29040	1.69	1.0E-107	M19816.1	NT	Human apolipoprotein B-100 (apoB) gene, exon 10
6025	18644	31386	4.74	1.0E-107	BE967469.1	EST_HUMAN	601442558F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3846494 5'
7399	19924	32788	1.4	1.0E-107	AW503913.1	EST_HUMAN	UI-HF-BN0-alf-c-08-q-UIr1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3079310 5'
7399	19924	32789	1.4	1.0E-107	AW503913.1	EST_HUMAN	UI-HF-BN0-alf-c-08-q-UIr1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3079310 5'
7536	20056	32830	1.28	1.0E-107	AI765078.1	EST_HUMAN	wh56h04.x1 NCL CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2384791 3'
9309	21909	34858	0.88	1.0E-107	AU122469.1	EST_HUMAN	AU122469 MAMMA1 Homo sapiens cDNA clone MAMMA1002433 5'
10533	23070	36083	2.05	1.0E-107	BE168726.1	EST_HUMAN	GV1-HT0516-140300-107-c10 HT0516 Homo sapiens cDNA
10583	23118	36133	3.35	1.0E-107	A1392850.1	EST_HUMAN	ig10d08.x1 NCL CGAP_CLL1 Homo sapiens cDNA clone IMAGE:2108363 3' similar to SW:AACT_DICD1
10825	23346	36362	2.16	1.0E-107	L49141.1	NT	P05095 ALPHA-ACTININ 3, NON MUSCULAR
10839	23360	36375	2.39	1.0E-107	BF686511.1	EST_HUMAN	Homo sapiens neuroendocrine-specific protein (NSP) gene, exon 4
11203	23708	36760	4.35	1.0E-107	BE540550.1	EST_HUMAN	602123933F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4281039 5'
11271	23009	36016	4.67	1.0E-107	11419701	NT	601066881F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3452829 5'
11271	23009	36017	4.67	1.0E-107	11419701	NT	Homo sapiens HSPC049 protein (HSPC049), mRNA
11577	24023	37092	3.77	1.0E-107	4507822	NT	Homo sapiens HSPC049 protein (HSPC049), mRNA
11830	25014		7.41	1.0E-107	AA001415.1	EST_HUMAN	Homo sapiens UDP glycosyltransferase 2 family, polypeptide B11 (UGT2B11) mRNA
189	12850		1.3	1.0E-108	AA341934.1	EST_HUMAN	z645e01.s1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:361944 3' similar to contains THR.b1 THR repetitive element
880	13602	26116	1.64	1.0E-108	BE296042.1	EST_HUMAN	EST47363 Fetal muscle Homo sapiens cDNA 5' end
1308	13902	26421	4.66	1.0E-108	Y18000.1	NT	601177018F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3532348 5'
2123	14701	27271	0.95	1.0E-108	BF028728.1	EST_HUMAN	Homo sapiens NF2 gene
2368	14939	27511	1.91	1.0E-108	A686040.1	EST_HUMAN	601871914F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3954939 5'
2368	14939	27512	1.91	1.0E-108	A686040.1	EST_HUMAN	601871914F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3954939 5'
2472	15039	27607	7.53	1.0E-108	BE206894.1	EST_HUMAN	PROTEOGLYCAN II PRECURSOR (HUMAN)
3392	16000	28478	0.73	1.0E-108	AF032897.1	NT	601871914F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3954939 5'
3392	16000	28479	0.73	1.0E-108	AF032897.1	NT	601871914F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3954939 5'
4237	16825	29275	1.43	1.0E-108	AW664438.1	EST_HUMAN	PROTEOGLYCAN II PRECURSOR (HUMAN); bb25b10.x1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:2863899 3' similar to gb:X53777 60S RIBOSOMAL PROTEIN L23 (HUMAN); gb:J05277 Mouse hexokinase mRNA, complete cds (MOUSE); Homo sapiens potassium channel subunit (HERG-3) mRNA, complete cds Homo sapiens potassium channel subunit (HERG-3) mRNA, complete cds h12a11.x1 NCL CGAP_GU1 Homo sapiens cDNA clone IMAGE:2972060 3' similar to SW:3BP1_MOUSE P55194 SH3-BINDING PROTEIN 3BP-1;

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4624	17207	29656	1.92	1.0E-108	U72961.1	NT	Human hepatocyte nuclear factor 4-alpha gene, exon 2
4624	17207	29657	1.92	1.0E-108	U72961.1	NT	Human hepatocyte nuclear factor 4-alpha gene, exon 2
4628	17501	29949	2.66	1.0E-108	7661979	NT	Homo sapiens KIAA0187 gene product (KIAA0187), mRNA
5044	17617	30082	0.93	1.0E-108	AW504796.1	EST_HUMAN	UI-HF-BNO-alm-e-04-0-UJ.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3080168 5'
5084	17657	30098	2.16	1.0E-108	AJ008005.1	NT	Homo sapiens PSN1 gene, alternative transcript
5318	17890	30289	0.81	1.0E-108	5031624	NT	Homo sapiens CCAAT-box-binding transcription factor (CBF2) mRNA
5670	18297	30777	1.2	1.0E-108	AW384094.1	EST_HUMAN	RC0-HT0372-241199-031-d03 HT0372 Homo sapiens cDNA
5718	18344	30851	2.96	1.0E-108	BE669018.1	EST_HUMAN	601444922F1 NIH_MGC_85 Homo sapiens cDNA clone IMAGE:3848880 5'
5718	18344	30852	2.96	1.0E-108	BE669018.1	EST_HUMAN	601444922F1 NIH_MGC_85 Homo sapiens cDNA clone IMAGE:3848880 5'
6084	18701	31529	0.83	1.0E-108	AF012623.1	NT	Homo sapiens familial mental retardation protein 2 (FMR2) gene, exon 20
6153	18766	31529	0.88	1.0E-108	BF334851.1	EST_HUMAN	PM4-CT0403-240700-001-c10 CT0403 Homo sapiens cDNA
6288	18896	31666	5.83	1.0E-108	AF264717.1	NT	Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-DSP2 mRNA, complete cds
6288	18896	31667	5.83	1.0E-108	AF264717.1	NT	Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-DSP2 mRNA, complete cds
6409	19012	31795	1.16	1.0E-108	AJ133289.1	NT	Homo sapiens cavadin-1/2 locus, Contig1, D7S622, genes CAV2 (exons 1, 2a, and 2b), CAV1 (exons 1 and 2)
6409	18786	31529	1.01	1.0E-108	BF334851.1	EST_HUMAN	PM4-CT0403-240700-001-c10 CT0403 Homo sapiens cDNA
6732	19326	32130	0.85	1.0E-108	AF018706.1	NT	Homo sapiens E8-AP ubiquitin-protein ligase (UBE3A) gene, exon 4
6732	19326	32131	0.85	1.0E-108	AF018706.1	NT	Homo sapiens E8-AP ubiquitin-protein ligase (UBE3A) gene, exon 4
7211	19742	32596	5.04	1.0E-108	11431857	NT	Homo sapiens G protein-coupled receptor, family C, group 5, member B (GPCR5B), mRNA
7465	19987	32852	3.44	1.0E-108	4758333	NT	Homo sapiens delta-8 fatty acid desaturase (FADS6) mRNA
7492	20015	32881	1.67	1.0E-108	BE252807.1	EST_HUMAN	601113471F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3354064 5'
7516	20036	32903	1.06	1.0E-108	BF528912.1	EST_HUMAN	602043394F1 NCI CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4181037 5'
7516	20036	32904	1.06	1.0E-108	BF528912.1	EST_HUMAN	602043394F1 NCI CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4181037 5'
8008	20550		1.77	1.0E-108	AF083500.1	NT	Homo sapiens connective tissue growth factor-like protein precursor, mRNA, complete cds
8058	20600	33509	1.47	1.0E-108	AW408694.1	EST_HUMAN	UI-HF-BMO-ads-e-12-0-UJ.r1 NIH_MGC_38 Homo sapiens cDNA clone IMAGE:3082878 5'
8058	20600	33510	1.47	1.0E-108	AW408694.1	EST_HUMAN	UI-HF-BMO-ads-e-12-0-UJ.r1 NIH_MGC_38 Homo sapiens cDNA clone IMAGE:3082878 5'
8977	21515	34439	1.08	1.0E-108	AF203977.1	NT	Homo sapiens ETS-family transcription factor EHF (EHF) mRNA, complete cds
8915	21552	34480	0.52	1.0E-108	N44974.1	EST_HUMAN	y05h10.r1 Soares melanocyte 2N6HM Homo sapiens cDNA clone IMAGE:273283 5' similar to PIR:A45773 A45773 kelch protein, long form - fruit fly;
10501	22895	36004	0.49	1.0E-108	11428155	NT	Homo sapiens similar to high-mobility group (nonhistone chromosomal) protein 4 (H. sapiens) (LOC83446), mRNA
10547	20278	33176	1.87	1.0E-108	BE535227.1	EST_HUMAN	601058769F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3445361 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10707	18037	30497	2.06	1.0E-108	Y12490.1	NT	Homo sapiens mRNA for Golgi-associated microtubule-binding protein (GMAP-210)
11151	23659	36703	4.23	1.0E-108	AW966185.1	EST_HUMAN	EST378258 MAGE resequences, MAGI Homo sapiens cDNA
11204	23709	36781	1.81	1.0E-108	AV708790.1	EST_HUMAN	AV708790 ADC Homo sapiens cDNA clone ADCAEE03 5'
11204	23709	36782	1.81	1.0E-108	AV708790.1	EST_HUMAN	AV708790 ADC Homo sapiens cDNA clone ADCAEE03 5'
11249	23779		2.91	1.0E-108	11441465	NT	Homo sapiens G protein-coupled receptor 48 (GPR48), mRNA
11305	23798	36857	1.72	1.0E-108	D63539.1	NT	Homo sapiens COL4A8 gene for $\alpha$ (IV) collagen, exon 23
12005	24308	30991	5.17	1.0E-108	AK024447.1	NT	Homo sapiens mRNA for FLJ00037 protein, partial cds
12414	24567		7.56	1.0E-108	BF346356.1	EST_HUMAN	602018571F1 NCI CGAP Brn87 Homo sapiens cDNA clone IMAGE:4154297 5'
46	12725	25186	2.13	1.0E-109	AW803116.1	EST_HUMAN	IL2-JM0077-260400-079-D06 UM0077 Homo sapiens cDNA
68	12747	25225	3.04	1.0E-109	D86974.1	NT	Human mRNA for KIAA0220 gene, partial cds
235	12895	25378	4.41	1.0E-109	11422486	NT	Homo sapiens hypothetical protein FLJ11316 (FLJ11316), mRNA
246	12905	25386	2.89	1.0E-109	11438391	NT	Homo sapiens reticulocalbin 1, EF-hand calcium binding domain (RCN1), mRNA
492	13125	25610	4.89	1.0E-109	4507712	NT	Homo sapiens tetratricopeptide repeat domain 2 (TTC2) mRNA
624	13251	25725	19.67	1.0E-109	AB023216.1	NT	Homo sapiens mRNA for KIAA0999 protein, partial cds
624	13251	25726	19.67	1.0E-109	AB023216.1	NT	Homo sapiens mRNA for KIAA0999 protein, partial cds
1050	13657	26168	0.72	1.0E-109	AL163249.2	NT	Homo sapiens chromosome 21 segment HS21C049
1244	13842	26359	24.19	1.0E-109	M28699.1	NT	Homo sapiens nucleolar phosphoprotein B23 (NPM1) mRNA, complete cds
1245	13842	26359	15.92	1.0E-109	M28699.1	NT	Homo sapiens nucleolar phosphoprotein B23 (NPM1) mRNA, complete cds
1589	14182	26714	0.98	1.0E-109	BE293673.1	EST_HUMAN	601186922F2 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2959636 5'
1589	14182	26715	0.98	1.0E-109	BE293673.1	EST_HUMAN	601186922F2 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2959636 5'
1915	14500	27055	3.28	1.0E-109	D13643.2	NT	Homo sapiens mRNA for KIAA0018 protein, partial cds
2263	14857	27434	1.19	1.0E-109	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
2292	14866	27441	2.08	1.0E-109	Y17123.1	NT	Homo sapiens SNF5/INI1 gene, exon 6
2652	15211	27783	2.86	1.0E-109	AI022328.1	EST_HUMAN	ow95a01.x1 Scarses_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:1654536 3' similar to TR:002197 002197 CIRCULATING CATHODIC ANTIGEN. ;
2652	15211	27784	2.86	1.0E-109	AI022328.1	EST_HUMAN	ow95a01.x1 Scarses_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:1654536 3' similar to TR:002197 002197 CIRCULATING CATHODIC ANTIGEN. ;
2653	15212	27785	2.01	1.0E-109	4504208	NT	Homo sapiens guanylate cyclase activator 1A (retina) (GUCY1A) mRNA
3094	15709	28180	1.68	1.0E-109	N85190.1	EST_HUMAN	J2816F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone J2816 5' similar to ZINC FINGER PROTEIN ZNF43
3435	16043	28524	1.34	1.0E-109	AW893192.1	EST_HUMAN	CM3-NN0009-190400-150-110 NN0009 Homo sapiens cDNA
3435	16043	28525	1.34	1.0E-109	AW893192.1	EST_HUMAN	CM3-NN0009-190400-150-110 NN0009 Homo sapiens cDNA
3569	16173	28655	0.9	1.0E-109	AF240698.1	NT	Homo sapiens retinol dehydrogenase homolog isoform-1 (RDH) mRNA, complete cds
3909	16508		0.93	1.0E-109	BE148144.1	EST_HUMAN	MRO-HT0209-110400-108-a04 HT0209 Homo sapiens cDNA

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4228	16816	29264	4.43	1.0E-109	A1855417.1	EST_HUMAN	ts98g08.x1 NCI_CGAP_G08 Homo sapiens cDNA clone IMAGE:229330 3' similar to WP.F53A2.8
4493	17078	28528	2.7	1.0E-109	4504206	NT	CE16100 ;
4705	17287	29731	1.18	1.0E-109	7682083	NT	Homo sapiens guanylate cyclase activator 1A (retina) (GUCATA) mRNA
5051	17824	30069	1.14	1.0E-109	R15400.1	EST_HUMAN	Homo sapiens KIAA0377 gene product (KIAA0377), mRNA
5465	18100	30418	0.78	1.0E-109	BF673718.1	EST_HUMAN	ye48g08.11 Soares infant brain INIB Homo sapiens cDNA clone IMAGE:53057 5'
5516	18148	30560	2.8	1.0E-109	5174822	NT	602136446F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4272922 5'
5792	18417		1.24	1.0E-109	BE178356.1	EST_HUMAN	Homo sapiens placental protein 11 (serine proteinase) (P11) mRNA
6085	24756	31448	1.02	1.0E-109	BF379688.1	EST_HUMAN	RC1-HT0615-200400-022-404 HT0615 Homo sapiens cDNA
6147	18417		1.3	1.0E-109	BE178356.1	EST_HUMAN	CM1-UT0038-060800-389-h07 UT0038 Homo sapiens cDNA
6491	19082	31875	0.8	1.0E-109	M23442.1	NT	RC1-HT0615-200400-022-404 HT0615 Homo sapiens cDNA
6491	19082	31876	0.8	1.0E-109	M23442.1	NT	Human interleukin 4 (IL-4) gene, complete cds
7289	19817	32676	0.85	1.0E-109	AB046811.1	NT	Human interleukin 4 (IL-4) gene, complete cds
7568	20083	32859	4.08	1.0E-109	11432574	NT	Homo sapiens mRNA for KIAA1591 protein, partial cds
7568	20085	32861	5.94	1.0E-109	BF182707.1	EST_HUMAN	Homo sapiens AT-binding transcription factor 1 (ATBF1), mRNA
7568	20085	32862	5.94	1.0E-109	BF182707.1	EST_HUMAN	Homo sapiens KIAA0495F1 NIH_MGC_18 Homo sapiens cDNA clone IMAGE:4040279 5'
8114	20655	33564	1.17	1.0E-109	AL049784.1	NT	601808495F1 NIH_MGC_18 Homo sapiens cDNA clone IMAGE:4040279 5'
8227	20768	33687	1.27	1.0E-109	AW749130.1	EST_HUMAN	Novel human gene mapping to chromosome 13
8591	21130		2.65	1.0E-109	AA077498.1	EST_HUMAN	PM0-BT0340-091298-002-e05 BT0340 Homo sapiens cDNA
8659	21208	34125	14.1	1.0E-109	BE787540.1	EST_HUMAN	7B18H01 Chromosome 7 Fetal Brain cDNA Library Homo sapiens cDNA clone 7B18H01
8659	21208	34126	14.1	1.0E-109	BE787540.1	EST_HUMAN	601479417F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3882124 5'
8908	21448	34368	0.57	1.0E-109	BE145672.1	EST_HUMAN	601479417F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3882124 5'
							IL0-HT0205-071189-142-g01 HT0205 Homo sapiens cDNA
9163	21698	34642	1.82	1.0E-109	H84860.1	EST_HUMAN	ye90g08.11 Soares retina N2b5HR Homo sapiens cDNA clone IMAGE:222110 5' similar to SP.A53491
9272	21798	34747	0.54	1.0E-109	BE397068.1	EST_HUMAN	AS3491 BUMETANIDE-SENSITIVE NA-K-Cl COTRANSPORTER - SPINY ;
9272	21798	34748	0.54	1.0E-109	BE397068.1	EST_HUMAN	601289760F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3820030 5'
9405	21914	34863	3.55	1.0E-109	F06604.1	EST_HUMAN	601289760F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3820030 5'
10653	23165	36200	2.73	1.0E-109	BE540909.1	EST_HUMAN	HSC1EC121 normalized infant brain cDNA Homo sapiens cDNA clone c-1ec12
10653	23165	36201	2.73	1.0E-109	BE540909.1	EST_HUMAN	601063030F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3449589 5'
10687	23217	36229	35.59	1.0E-109	BF694831.1	EST_HUMAN	602080724F2 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4245341 5'
10847	23368	36386	2	1.0E-109	7662279	NT	Homo sapiens KIAA0744 gene product; histone deacetylase 7 (KIAA0744), mRNA
10847	23368	36387	2	1.0E-109	7662279	NT	Homo sapiens KIAA0744 gene product; histone deacetylase 7 (KIAA0744), mRNA
11004	23518	36553	1.85	1.0E-109	AU121370.1	EST_HUMAN	AU121370 HEMBB1 Homo sapiens cDNA clone HEMBB1002690 5'
11248	23778	36835	2.84	1.0E-109	4502838	NT	Homo sapiens Chediak-Higashi syndrome 1 (CHS1) mRNA

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11285	23738	36794	6.81	1.0E-109	W16510.1	EST_HUMAN	zb08b12.r1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:301439 5' similar to
12131	14866	27441	1.6	1.0E-109	Y17123.1	NT	PIR:S43969 S43969 p54-beta stress-activated protein kinases - rat ;
12252	24463	30981	15.45	1.0E-109	AB011399.1	NT	Homo sapiens SNF5/INI1 gene, exon 6
3	12683	25139	1.19	1.0E-110	7549804	NT	Homo sapiens gene for AF-6, complete cds
40	12719	25179	4.61	1.0E-110	5803073	NT	Homo sapiens deiodinase, iodothyronine, type II (DIO2), transcript variant 2, mRNA
40	12719	25180	4.61	1.0E-110	5803073	NT	Homo sapiens leucine-zipper-like transcriptional regulator, 1 (LZTR1), mRNA
114	12683	25139	0.83	1.0E-110	7549804	NT	Homo sapiens leucine-zipper-like transcriptional regulator, 1 (LZTR1), mRNA
316	12970	25459	1	1.0E-110	D87291.1	NT	Homo sapiens deiodinase, iodothyronine, type II (DIO2), transcript variant 2, mRNA
553	13184	25662	0.93	1.0E-110	U84550.1	NT	Human mRNA for inward rectifier potassium channel, complete cds
1222	13822	26337	0.97	1.0E-110	5031620	NT	Human dystrobrevin (DTN) gene, exon 20
1322	13916	26438	1.28	1.0E-110	AB032253.1	NT	Homo sapiens calcitonin receptor-like (CALCRL) mRNA
1965	14549	27105	1.48	1.0E-110	BE379477.1	EST_HUMAN	Homo sapiens BAZ1B mRNA for bromodomain adjacent to zinc finger domain 1B, complete cds
2103	14882		1.65	1.0E-110	BF508896.1	EST_HUMAN	601237545F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3608683 5'
2666	15484		0.95	1.0E-110	4503098	NT	UI-H-B14-eos-b-05-0.U1.s1 NCI CGAP Sub8 Homo sapiens cDNA clone IMAGE:3085784 3'
3065	13916	26438	0.85	1.0E-110	AB032253.1	NT	Homo sapiens chondroitin sulfate proteoglycan 4 (melanoma-associated) (CSPG4), mRNA
3123	15737		1.2	1.0E-110	U78027.1	NT	Homo sapiens BAZ1B mRNA for bromodomain adjacent to zinc finger domain 1B, complete cds
3228	15840	28319	6.37	1.0E-110	11436041	NT	Homo sapiens Bruton's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein
3228	15840	28320	6.37	1.0E-110	11436041	NT	(L44L) and FTP3 (FTP3) genes, complete cds
							Homo sapiens pregnancy-zone protein (PZP), mRNA
4128	16720	29175	0.92	1.0E-110	BE018556.1	EST_HUMAN	Homo sapiens pregnancy-zone protein (PZP), mRNA
4281	16967	29314	1.06	1.0E-110	M15918.1	NT	bb82a05.y1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3048848 5' similar to TR:O60312 O60312
4740	17321	29761	2.32	1.0E-110	A017213.1	EST_HUMAN	KIAA0566 PROTEIN ;
4758	17339	29785	3.28	1.0E-110	AU117812.1	EST_HUMAN	Human autoimmune antigen small nuclear ribonucleoprotein E, pseudogene
5109	17681		1.8	1.0E-110	7682441	NT	alpha32b10.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1627963 3' similar to
5498	18132	30540	2.16	1.0E-110	BE299406.1	EST_HUMAN	SW:N121_RAT_P52591 NUCLEAR ENVELOPE PORE MEMBRANE PROTEIN POM 121 ;
5900	18522	31247	0.7	1.0E-110	BE621069.1	EST_HUMAN	AU117812 HEMBA1 Homo sapiens cDNA clone HEMBA1002241 5'
5917	18539	31264	6.81	1.0E-110	11419323	NT	Homo sapiens KIAA1002 protein (KIAA1002), mRNA
5917	18539	31265	6.81	1.0E-110	11419323	NT	601118710F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3026538 5'
6818	24771	32226	3.2	1.0E-110	M55112.1	NT	601483877F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3895785 5'
7159	19691	32536	0.83	1.0E-110	U08888.1	NT	Homo sapiens hypothetical protein FLJ10300 (FLJ10300), mRNA
7159	19691	32537	0.83	1.0E-110	U08888.1	NT	Homo sapiens hypothetical protein FLJ10300 (FLJ10300), mRNA
							Human cystic fibrosis transmembrane conductance regulator (CFTR) gene, exon 7
							Human GS2 gene, exon 2
							Human GS2 gene, exon 2



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7364	19890	32753	0.74	1.0E-110	A1560289.1	EST_HUMAN	tn12408.x1 NCI_CGAP_Brm25 Homo sapiens cDNA clone IMAGE:2167407 3' similar to SW:ETV1_HUMAN
7454	19978	32843	11.26	1.0E-110	AV714276.1	EST_HUMAN	P50549 ETS TRANSLOCATION VARIANT 1;
7454	19978	32844	11.26	1.0E-110	AV714276.1	EST_HUMAN	AV714276 DCB Homo sapiens cDNA clone DCBCEGE01 5'
7478	20000	32865	2.84	1.0E-110	AB020675.1	NT	AV714276 DCB Homo sapiens cDNA clone DCBCEGE01 5'
7571	20088	32864	1.06	1.0E-110	AU137923.1	EST_HUMAN	Homo sapiens mRNA for KIAA0868 protein, partial cds
9258	21784	34737	0.54	1.0E-110	BE302594.1	EST_HUMAN	AU137823 PLACE1 Homo sapiens cDNA clone PLACE1007511 5'
9487	21997	34953	2.91	1.0E-110	AW838394.1	EST_HUMAN	ba68101.y1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2805551 5' similar to TR:O77258 O77258
10226	22721	35712	3.91	1.0E-110	11432732	NT	EG:114D9.2 PROTEIN;
10826	23158	36171	3.89	1.0E-110	Y12337.1	NT	QV2-L T0053-020400-119-e04 L T0053 Homo sapiens cDNA
10846	23367	36384	3.87	1.0E-110	BE734357.1	EST_HUMAN	Homo sapiens galactokinase 2 (GALK2), mRNA
10846	23367	36385	3.87	1.0E-110	BE734357.1	EST_HUMAN	H sapiens mRNA for myotonic dystrophy protein kinase like protein
11317	23015	36024	3.28	1.0E-110	AA446529.1	EST_HUMAN	601565604F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3840433 5'
11719	24128		2.86	1.0E-110	BE897218.1	EST_HUMAN	601565604F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3840433 5'
11849	24209		11.86	1.0E-110	AW062258.1	EST_HUMAN	zw67g02.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:781298 5' similar to TR:G1145816
12092	24360		2.73	1.0E-110	AB011399.1	NT	G1145816 FKBP54;
12239	25027		8.39	1.0E-110	BF364546.1	EST_HUMAN	601439784F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3824548 5'
12537	14692		1.43	1.0E-110	BF508896.1	EST_HUMAN	IL0-B T0163-040899-094-g10 B T0163 Homo sapiens cDNA
186	12847		28.49	1.0E-111	U43701.1	NT	Homo sapiens gene for AF-6, complete cds
210	12871	25357	0.94	1.0E-111	4758807	NT	PM3-NN1082-140500-008-f12 NN1082 Homo sapiens cDNA
764	13383		1.64	1.0E-111	BF035327.1	EST_HUMAN	UI-H-B14-aos-b-05-0-U1.s1 NCI_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3085784 3'
773	13392	25862	5.48	1.0E-111	BF035327.1	EST_HUMAN	Human ribosomal protein L23a mRNA, complete cds
862	13573	26089	2.34	1.0E-111	M25142.1	NT	Homo sapiens ras GTPase activating protein-like (NGAP) mRNA
1670	14263	26797	2.34	1.0E-111	7682177	NT	601458531F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862086 5'
4250	16838	29288	1.25	1.0E-111	K02288.1	NT	Homo sapiens cat eye syndrome critical region gene 1 (CECR1), mRNA
4423	17008	29451	4.84	1.0E-111	K02288.1	NT	Human cardiac alpha-myosin heavy chain (MYH6) gene, exons 32 to 34
5814	18438	31160	0.91	1.0E-111	BE867909.1	EST_HUMAN	Homo sapiens KIAA0555 gene product (KIAA0555), mRNA
6183	18793	31562	1.58	1.0E-111	A1344679.1	EST_HUMAN	Homo sapiens DKFZP434D156 protein (DKFZP434D156), mRNA
6781	19372	32188	1	1.0E-111	AL040782.1	EST_HUMAN	Human enkephalin B (enkeB) gene, exon 4 and 3' flank and complete cds
6998	19632	32470	1.3	1.0E-111	AW294948.1	EST_HUMAN	601443660F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3847655 5'
7471	19993	32856	2.68	1.0E-111	BF366228.1	EST_HUMAN	qp09g12.x1 NCI_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1917574 3' similar to gb:M28893 RAS-RELATED PROTEIN RAL-A (HUMAN);
							DKFZP434C1815_r1_434 (synonym: htes3) Homo sapiens cDNA clone DKFZP434C1815 5'
							UI-H-BW0-ail-d-03-Q-U1.s1 NCI_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:2728525 3'
							IL2-NT0101-280700-114-E03 NT0101 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7540	20060	32934	3.47	1.0E-111	A1761228.1	EST_HUMAN	w168d01.x1 NCI_CGAP_K1212 Homo sapiens cDNA clone IMAGE:2398465 3' similar to gb:J04813 CYTOCHROME P450 IIAS (HUMAN);
7610	20123	33000	1.1	1.0E-111	U80017.1	NT	Homo sapiens basic transcription factor 2 p44 (btf2p44) gene, partial cds, neuronal apoptosis inhibitory protein (nrip) and survival motor neuron protein (smn) genes, complete cds
8038	20580	33486	0.77	1.0E-111	AA278888.1	EST_HUMAN	zs79g03.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:703732 5' similar to TR:G1256410 G1256410 11-ZINC-FINGER TRANSCRIPTION FACTOR.;
8038	20580	33487	0.77	1.0E-111	AA278888.1	EST_HUMAN	zs79g03.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:703732 5' similar to TR:G1256410 G1256410 11-ZINC-FINGER TRANSCRIPTION FACTOR.;
8128	20670	33580	0.89	1.0E-111	11431896	NT	Homo sapiens protein x 0001 (LOC51185), mRNA
8183	20724	33638	5.9	1.0E-111	U66533.1	NT	Human beta4-integrin (ITGB4) gene, exon 13
8613	21152	34056	0.82	1.0E-111	11420516	NT	Homo sapiens nuclear factor of activated T-cells, cytoplasmic 2 (NFATC2), mRNA
8710	21249	34172	0.89	1.0E-111	AK024453.1	NT	Homo sapiens mRNA for FLJ00045 protein, partial cds
8743	21282		23.24	1.0E-111	BF214902.1	EST_HUMAN	601847132F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4078303 5'
8817	21358	34280	12.59	1.0E-111	X17033.1	NT	Human mRNA for integrin alpha-2 subunit
8817	21358	34281	12.59	1.0E-111	X17033.1	NT	Human mRNA for integrin alpha-2 subunit
9017	21554	34482	3.03	1.0E-111	AF091395.1	NT	Homo sapiens Trio isoform mRNA, complete cds
9241	21787	34716	0.58	1.0E-111	BF333210.1	EST_HUMAN	QV2-BT0817-270900-398-e08 BT0817 Homo sapiens cDNA
10056	22551	35546	2.03	1.0E-111	AA504190.1	EST_HUMAN	aa58g02.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:825170 3' similar to gb:U09235 VACUOLAR ATP SYNTHASE CATALYTIC SUBUNIT A, UBIQUITOUS (HUMAN);
10082	22577		1.53	1.0E-111	D10083.1	NT	Homo sapiens RGH1 gene, retrovirus-like element
10173	22668	35663	5.78	1.0E-111	AA131248.1	EST_HUMAN	z31f01.r1 Soares_pregnant_uterus_NBR-PU Homo sapiens cDNA clone IMAGE:503545 5'
10922	23441	36462	4.93	1.0E-111	U88159.1	NT	Human thrombospondin receptor (MPL) gene, exons 1,2,3,4,5 and 6
11674	24093	37146	4.3	1.0E-111	11417901	NT	Homo sapiens meningioma (disrupted in balanced translocation) 1 (MN1), mRNA
12234	24450	30954	2.23	1.0E-111	AV708482.1	EST_HUMAN	AV708482 ADC Homo sapiens cDNA clone ADCAOB08 5'
12360	24816	30791	6.35	1.0E-111	W22562.1	EST_HUMAN	72C9 Human retina cDNA Tsp5091-cleaved sublibrary Homo sapiens cDNA not directional
12507	18039	30498	1.31	1.0E-111	AB035356.1	NT	Homo sapiens mRNA for neurixin I-alpha protein, complete cds
636	13259	25734	1.69	1.0E-112	4501854	NT	Homo sapiens acetyl-Coenzyme A carboxylase beta (ACACB), mRNA
638	13261	25736	5.94	1.0E-112	U28103.1	NT	Human steroidogenic acute regulatory protein (STAR) gene, exon 5
638	13261	25737	5.94	1.0E-112	U28103.1	NT	Human steroidogenic acute regulatory protein (STAR) gene, exon 5
660	13283	25763	1.42	1.0E-112	BF509039.1	EST_HUMAN	UI-H-B14-act-g-04-0-UI.s1 NCI_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3086023 3'
660	13283	25764	1.42	1.0E-112	BF509039.1	EST_HUMAN	UI-H-B14-act-g-04-0-UI.s1 NCI_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3086023 3'
1039	13649	26161	3.86	1.0E-112	AF157623.1	NT	Homo sapiens HTRA serine protease (PRSS11) gene, complete cds
1100	13705	26213	2	1.0E-112	P52742	SWISSPROT	ZINC FINGER PROTEIN 135
1722	14313	26853	4.44	1.0E-112	7662125	NT	Homo sapiens KIAA0440 protein (KIAA0440), mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1722	14313	26854	4.44	1.0E-112	7862125	NT	Homo sapiens KIAA0440 protein (KIAA0440), mRNA
1958	14444	27000	1.56	1.0E-112	AF248540.1	NT	Homo sapiens intersectin 2 (SH3D1B) mRNA, complete cds
2550	15114	27884	1.81	1.0E-112	BE868859.1	EST_HUMAN	601442674F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3846858 5'
3114	15729		0.59	1.0E-112	4504116	NT	Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1) mRNA
3953	16551	29020	0.74	1.0E-112	BE076073.1	EST_HUMAN	MR2-BT0590-090300-113-09 BT0590 Homo sapiens cDNA
4709	17281	29735	0.65	1.0E-112	4504116	NT	Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1) mRNA
4864	17441	28991	5.1	1.0E-112	AB037832.1	NT	Homo sapiens mRNA for KIAA1411 protein, partial cds
4864	17441	28992	5.1	1.0E-112	AB037832.1	NT	Homo sapiens mRNA for KIAA1411 protein, partial cds
5948	18472	31198	38.42	1.0E-112	N48046.1	EST_HUMAN	Y35d07.r1 Soares melanocyte 2NBHM Homo sapiens cDNA clone IMAGE:273229 5'
6227	18936	31609	1.36	1.0E-112	AF149773.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
6294	18902	31672	0.85	1.0E-112	AW502437.1	EST_HUMAN	UI-HF-BR0P-ais-g-08-0-UI.1 NIH_MGC_52 Homo sapiens cDNA clone IMAGE:3075658 5'
6294	18902	31673	0.85	1.0E-112	AW502437.1	EST_HUMAN	UI-HF-BR0P-ais-g-08-0-UI.1 NIH_MGC_52 Homo sapiens cDNA clone IMAGE:3075658 5'
6397	19000	31778	1.2	1.0E-112	BE741666.1	EST_HUMAN	60159477F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3948557 5'
6747	19340	32146	0.68	1.0E-112	BE273103.1	EST_HUMAN	601142755F1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:3506508 5'
6747	19340	32147	0.68	1.0E-112	BE273103.1	EST_HUMAN	601142755F1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:3506508 5'
6928	19587	32416	1.36	1.0E-112	BF574235.1	EST_HUMAN	602131405F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4270921 5'
7375	19901	32764	1.57	1.0E-112	11416777	NT	Homo sapiens solute carrier family 6 (neurotransmitter transporter, L-proline), member 7 (SLC6A7), mRNA
7375	19901	32765	1.57	1.0E-112	11416777	NT	Homo sapiens solute carrier family 6 (neurotransmitter transporter, L-proline), member 7 (SLC6A7), mRNA
8134	20675	33587	1.93	1.0E-112	AU118051.1	EST_HUMAN	AU118051 HEMBA1 Homo sapiens cDNA clone HEMBA1002773 5'
8887	21425	34350	2.49	1.0E-112	BE867635.1	EST_HUMAN	601443151F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3847285 5'
8887	21425	34351	2.49	1.0E-112	BE867635.1	EST_HUMAN	601443151F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3847285 5'
9807	22305	35289	2.06	1.0E-112	BF111413.1	EST_HUMAN	7130d7.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3523020 3' similar to
10657	23189	36205	3.51	1.0E-112	AW863327.1	EST_HUMAN	MR3-SND009-100400-106-b12 SND009 Homo sapiens cDNA
10743	23267	36283	1.85	1.0E-112	T93967.1	EST_HUMAN	Y456d10.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:112243 3' similar to
10743	23267	36284	1.85	1.0E-112	T93967.1	EST_HUMAN	SP-C40H1.1 CE00109 OVARIAN PROTEIN ;
10827	23348	36354	4.28	1.0E-112	AJ249900.1	NT	Y456d10.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:112243 3' similar to
10976	23491	36521	1.76	1.0E-112	BE280476.1	EST_HUMAN	SP-C40H1.1 CE00109 OVARIAN PROTEIN ;
11051	23564	36599	2.08	1.0E-112	AB04584.1	EST_HUMAN	Homo sapiens mRNA for secreted modular calcium-binding protein (smoc1 gene)
11062	23574	36611	4.71	1.0E-112	AW377670.1	EST_HUMAN	601155323F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3138899 5'
							IL-BT061-311298-009 BT061 Homo sapiens cDNA
							PM0-CT0237-141099-001-h02 CT0237 Homo sapiens cDNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
772	13391	25890	5.13	1.0E-113	A1365586.1	EST_HUMAN	ac95f01.x1 Schiller meningioma Homo sapiens cDNA clone IMAGE:1953625 3'
772	13391	25891	5.13	1.0E-113	A1365586.1	EST_HUMAN	ac95f01.x1 Schiller meningioma Homo sapiens cDNA clone IMAGE:1953625 3'
978	13590	28105	6.33	1.0E-113	M11965.1	NT	Human X-linked phosphoglycerate kinase gene, exon 8
1588	14181	26713	2.48	1.0E-113	A1365586.1	EST_HUMAN	ac95f01.x1 Schiller meningioma Homo sapiens cDNA clone IMAGE:1953625 3'
1983	15395	27126	0.92	1.0E-113	AF240775.1	NT	Homo sapiens eIF4E-transporter mRNA, complete cds
2142	14720	27291	1.02	1.0E-113	BF515218.1	EST_HUMAN	UIH-BW1-enl-f03-0-UI. st1 NCI CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3082876 3'
3164	15778	28249	2.06	1.0E-113	AJ223948.1	NT	Homo sapiens mRNA for putative RNA helicase, 3' end
5434	24852		3.07	1.0E-113	BE780958.1	EST_HUMAN	601469465F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3872536 5'
5684	18311	30806	6	1.0E-113	AU127214.1	EST_HUMAN	AU127214 NT2RP2 Homo sapiens cDNA clone NT2RP2000807 5'
6080	18697	31444	3.89	1.0E-113	AU140291.1	EST_HUMAN	AU140291 PLACE2 Homo sapiens cDNA clone PLACE2000274 5'
6106	18722	31475	1	1.0E-113	AF016535.1	NT	Homo sapiens P-glycoprotein (mdr1) mRNA, complete cds
6220	18830	31604	2.43	1.0E-113	11525737	NT	Homo sapiens UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 8 (GalNAc-T8) (GALNT8), mRNA
6304	18911	31684	0.88	1.0E-113	9961249	NT	Homo sapiens ATP-binding cassette, sub-family B (MDR/TAP), member 4 (ABCB4), transcript variant B, mRNA
6304	18911	31685	0.88	1.0E-113	9961249	NT	Homo sapiens ATP-binding cassette, sub-family B (MDR/TAP), member 4 (ABCB4), transcript variant B, mRNA
6458	19059	31844	0.71	1.0E-113	6006002	NT	Homo sapiens glutamate receptor, ionotropic, N-methyl D-aspartate 2A (GRIN2A) mRNA
6458	19059	31845	0.71	1.0E-113	6006002	NT	Homo sapiens glutamate receptor, ionotropic, N-methyl D-aspartate 2A (GRIN2A) mRNA
7362	19888	32751	0.77	1.0E-113	BE262161.1	EST_HUMAN	601152078F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3508382 5'
7362	19888	32752	0.77	1.0E-113	BE262161.1	EST_HUMAN	601152078F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3508382 5'
9024	21561	34488	3	1.0E-113	BE382842.1	EST_HUMAN	601297709F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3627554 5'
9024	21561	34489	3	1.0E-113	BE382842.1	EST_HUMAN	601297709F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3627554 5'
9322	21836		0.72	1.0E-113	BE772667.1	EST_HUMAN	RC1-FT0134-280600-021-402 FT0134 Homo sapiens cDNA
9745	22243	35224	1.2	1.0E-113	11429387	NT	Homo sapiens transmembrane protein 2 (TMEM2), mRNA
9843	22341	35323	0.55	1.0E-113	M21535.1	NT	Human erg protein (ets-related gene) mRNA, complete cds
9863	22458	35441	0.81	1.0E-113	5453997	NT	Homo sapiens RAN binding protein 7 (RANBP7), mRNA
9863	22458	35442	0.81	1.0E-113	5453997	NT	Homo sapiens RAN binding protein 7 (RANBP7), mRNA
11002	23516	36551	1.71	1.0E-113	AW500519.1	EST_HUMAN	UI-HF-BN0-ajb-b-12-0-UI.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3077326 5'
11011	23525	36559	2.11	1.0E-113	AW630291.1	EST_HUMAN	h81409.y1 NCI CGAP_GU1 Homo sapiens cDNA clone IMAGE:2969176 5' similar to TR:O60327 O60327
11011	23525	36560	2.11	1.0E-113	AW630291.1	EST_HUMAN	h81409.y1 NCI CGAP_GU1 Homo sapiens cDNA clone IMAGE:2969176 5' similar to TR:O60327 O60327
11097	19059	31844	1.58	1.0E-113	6006002	NT	Homo sapiens glutamate receptor, ionotropic, N-methyl D-aspartate 2A (GRIN2A) mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11097	19059	31845	1.58	1.0E-113	6006002	NT	Homo sapiens glutamate receptor, ionotropic, N-methyl D-aspartate 2A (GRIN2A) mRNA
11141	23849	36691	3.51	1.0E-113	BE282968.1	EST_HUMAN	601105529F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:288368 5'
11370	23822	36884	2.53	1.0E-113	AA580720.1	EST_HUMAN	nc80603.r1 NCJ_CGAP_GC1 Homo sapiens cDNA clone IMAGE:787069 5' similar to SW:FEN1_HUMAN P39748 FLAP ENDONUCLEASE-1;
11370	23822	36885	2.53	1.0E-113	AA580720.1	EST_HUMAN	nc80603.r1 NCJ_CGAP_GC1 Homo sapiens cDNA clone IMAGE:787069 5' similar to SW:FEN1_HUMAN P39748 FLAP ENDONUCLEASE-1;
62	12741	25213	1.2	1.0E-114	Y17151.2	NT	Homo sapiens mRNA for multidrug resistance protein 3 (ABCC3)
62	12741	25214	1.2	1.0E-114	Y17151.2	NT	Homo sapiens mRNA for multidrug resistance protein 3 (ABCC3)
62	12741	25215	1.2	1.0E-114	Y17151.2	NT	Homo sapiens mRNA for multidrug resistance protein 3 (ABCC3)
673	13297	25779	22.22	1.0E-114	T70551.1	EST_HUMAN	y015c01.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:108288 3' similar to gb:A21187 ALPHA-2-MACROGLOBULIN PRECURSOR (HUMAN); contains Alu repetitive element;
1109	13713	26223	2.93	1.0E-114	8823087	NT	Homo sapiens hypothetical protein FLJ20080 (FLJ20080), mRNA
1356	13950	26476	3.57	1.0E-114	7657529	NT	Homo sapiens rhabdoid tumor deletion region protein 1 (RTDR1), mRNA
1684	14278	26809	1.26	1.0E-114	6631094	NT	Homo sapiens minichromosome maintenance deficient (S. cerevisiae) 3 (MCM3), mRNA
1711	14304	26841	7.13	1.0E-114	6679073	NT	Homo sapiens nucleoporin-like protein 1 (NLP_1), mRNA
2830	12727	25189	2.13	1.0E-114	AB033102.1	NT	Homo sapiens mRNA for KIAA1276 protein, partial cds
2830	12727	25190	2.13	1.0E-114	AB033102.1	NT	Homo sapiens mRNA for KIAA1276 protein, partial cds
3165	15778	28250	2.36	1.0E-114	X04086.1	NT	Human gene for catelase (EC 1.11.1.6) exon 2 mapping to chromosome 11, band p13
3207	15819	28295	1.02	1.0E-114	BF206374.1	EST_HUMAN	601869932F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4100214 5'
4088	16684	29142	1.81	1.0E-114	AF149773.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
4480	17085	29515	0.92	1.0E-114	J03171.1	NT	Human interferon-alpha receptor (HuIFN-alpha-Rec) mRNA, complete cds
5324	17886	30302	0.89	1.0E-114	BE275324.1	EST_HUMAN	601122173F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3346099 5'
5360	17920	30334	0.83	1.0E-114	AA194468.1	EST_HUMAN	2q05q05.r1 Stratiogene muscle 937208 Homo sapiens cDNA clone IMAGE:828832 5' similar to contains MER22.13 MER22 repetitive element;
5597	18227	30674	1.36	1.0E-114	4506880	NT	Homo sapiens sema domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 5A (SEMASA) mRNA
5597	18227	30675	1.36	1.0E-114	4506880	NT	Homo sapiens sema domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 5A (SEMASA) mRNA
5781	18408	31122	1.35	1.0E-114	9257201	NT	Homo sapiens clathrin, heavy polypeptide-like 1 (CLTCL1), transcript variant 2, mRNA
7137	19478		1.13	1.0E-114	AB041533.1	NT	Homo sapiens HCMOGT-1 mRNA for sperm antigen, complete cds
7288	19816	32674	1.2	1.0E-114	AU134187.1	EST_HUMAN	AU134187 OVARC1 Homo sapiens cDNA clone OVARC1001444 5'
7288	19816	32675	1.2	1.0E-114	AU134187.1	EST_HUMAN	AU134187 OVARC1 Homo sapiens cDNA clone OVARC1001444 5'
7326	19853	32715	7.05	1.0E-114	Y18000.1	NT	Homo sapiens NF2 gene

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7326	19853	32716	7.05	1.0E-114	Y18000.1	NT	Homo sapiens NF2 gene
7832	20374	33280	1.88	1.0E-114	4557800	NT	Homo sapiens gamma-aminobutyric acid (GABA) A receptor, alpha 2 (GABRA2) mRNA
8108	20849	33557	1.81	1.0E-114	A1963139.1	EST_HUMAN	qy68d06.x1 NCJ_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2017163 3'
8108	20849	33557	1.81	1.0E-114	A1963139.1	EST_HUMAN	qy68d06.x1 NCJ_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2017163 3'
8635	21174	34093	4.12	1.0E-114	U63041.1	NT	Human neural cell adhesion molecule CD56 mRNA, complete cds
8702	21241	34165	5.52	1.0E-114	AB011133.1	NT	Homo sapiens mRNA for KIAA0561 protein, partial cds
8702	21241	34166	5.52	1.0E-114	AB011133.1	NT	Homo sapiens mRNA for KIAA0561 protein, partial cds
9110	21646	34586	0.92	1.0E-114	BF109832.1	EST_HUMAN	789g12.x1 Soares NSF F8 9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3526847 3' similar to TR:Q9UHN6 Q9UHN6 TRANSMEMBRANE PROTEIN 2 ;
9335	21849		18.44	1.0E-114	AW327455.1	EST_HUMAN	dq0305.x1 NIH_MGC_2 Homo sapiens cDNA clone IMAGE:2846744 5'
9384	20322	33227	3.14	1.0E-114	AF077754.1	NT	Homo sapiens tyrosine kinase pp60-c-src (SRC) gene, exon 12 and partial cds
9467	21962		6.13	1.0E-114	M13536.1	NT	Human ceruloplasmin mRNA
10045	22540	35537	0.94	1.0E-114	BE870004.1	EST_HUMAN	601449752F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3863500 5'
10066	22561	35556	1.32	1.0E-114	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
10434	22928	35935	0.71	1.0E-114	BE171984.1	EST_HUMAN	MRO-HT0559-250200-002-407 HT0559 Homo sapiens cDNA
							ba73g12.y1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2806088 5' similar to gb:X17208 40S RIBOSOMAL PROTEIN S4 (HUMAN); gb:M20632 Mouse LLRep3 protein mRNA from a repetitive element, complete (MOUSE);
10668	23198		13.62	1.0E-114	BE302688.1	EST_HUMAN	
11070	23582	36622	3.31	1.0E-114	AV733454.1	EST_HUMAN	AV733454 cda Homo sapiens cDNA clone cdABA08 5'
11070	23582	36623	3.31	1.0E-114	AV733454.1	EST_HUMAN	AV733454 cda Homo sapiens cDNA clone cdABA08 5'
12137	25093		3.79	1.0E-114	11418041	NT	Homo sapiens TNF-inducible protein CG12-1 (CG12-1), mRNA
12410	24565	30909	2.85	1.0E-114	11034850	NT	Homo sapiens hypothetical protein (DJ1042K10.2), mRNA
12410	24565	30910	2.85	1.0E-114	11034850	NT	Homo sapiens hypothetical protein (DJ1042K10.2), mRNA
25	12704	25162	6.12	1.0E-115	4758111	NT	Homo sapiens HLA-B associated transcript-1 (D6S81E) mRNA
135	12800	25288	2.34	1.0E-115	4505938	NT	Homo sapiens polymerase (RNA) II (DNA directed) polypeptide A (220kD) (POLR2A) mRNA
139	12804		8.73	1.0E-115	4557887	NT	Homo sapiens keratin 18 (KRT18) mRNA
314	12868	25456	3.77	1.0E-115	AW804759.1	EST_HUMAN	QV4-UM0094-300300-156-b08 UM0094 Homo sapiens cDNA
							q0801.x1 NCJ_CGAP_GC4 Homo sapiens cDNA clone IMAGE:1946809 3' similar to TR:O00536 O00536 TTF-I INTERACTING PEPTIDE 5 ;
561	13192	25670	0.95	1.0E-115	A1339206.1	EST_HUMAN	q0801.x1 NCJ_CGAP_GC4 Homo sapiens cDNA clone IMAGE:1946809 3' similar to TR:O00536 O00536 TTF-I INTERACTING PEPTIDE 5 ;
561	13192	25671	0.95	1.0E-115	A1339206.1	EST_HUMAN	q0801.x1 NCJ_CGAP_GC4 Homo sapiens cDNA clone IMAGE:1946809 3' similar to TR:O00536 O00536 TTF-I INTERACTING PEPTIDE 5 ;
819	13436	25942	1.29	1.0E-115	5174702	NT	Homo sapiens transforming growth factor beta-activated kinase-binding protein 1 (TAB1), mRNA
819	13436	25943	1.29	1.0E-115	5174702	NT	Homo sapiens transforming growth factor beta-activated kinase-binding protein 1 (TAB1), mRNA
821	13438	25945	180.74	1.0E-115	4503794	NT	Homo sapiens ferritin, heavy polypeptide 1 (FTH1) mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1806	14198	26730	1.2	1.0E-115	AF229180.1	NT	Homo sapiens alpha-aminoacidipate semialdehyde synthase mRNA, complete cds
1806	14198	26731	1.2	1.0E-115	AF229180.1	NT	Homo sapiens alpha-aminoacidipate semialdehyde synthase mRNA, complete cds
1881	14487	27025	1.19	1.0E-115	U78027.1	NT	Homo sapiens Bruton's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3) genes, complete cds
2125	14703	27273	1.11	1.0E-115	BE745489.1	EST_HUMAN	601578838F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3928832 5'
2125	14703	27274	1.11	1.0E-115	BE745469.1	EST_HUMAN	601578838F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3928832 5'
3149	15763	28230	2.81	1.0E-115	AJ245922.1	NT	Homo sapiens mRNA for alpha-tubulin 8 (TUBA8 gene)
3149	15763	28231	2.81	1.0E-115	AJ245922.1	NT	Homo sapiens mRNA for alpha-tubulin 8 (TUBA8 gene)
3519	16124	28604	2.12	1.0E-115	AJ277892.1	NT	Homo sapiens partial TTN gene for titin
4115	16709	29164	4.23	1.0E-115	AB002348.2	NT	Homo sapiens mRNA for KIAA0350 protein, partial cds
4353	16940	29382	1.31	1.0E-115	AL137183.1	NT	Novel human gene mapping to chromosome X
4490	17075	29525	2.98	1.0E-115	AL137183.1	NT	Homo sapiens sir2-like 3 (SIRT3), mRNA
4529	17113	29557	4.4	1.0E-115	4758279	NT	Homo sapiens EphA4 (EPHA4) mRNA
4783	17363	29813	2.89	1.0E-115	AL098857.1	NT	Novel human mRNA from chromosome 1, which has similarities to BAT2 genes
4783	17363	29814	2.89	1.0E-115	AL098857.1	NT	Novel human mRNA from chromosome 1, which has similarities to BAT2 genes
5032	17606	30050	3.79	1.0E-115	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C088
5032	17606	30051	3.79	1.0E-115	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C088
5550	18182	30597	2.42	1.0E-115	AW970335.1	EST_HUMAN	EST382416 IMAGE resequences, MAGK Homo sapiens cDNA
5617	18246	30697	1.07	1.0E-115	BF665387.1	EST_HUMAN	602118346F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4276738 5'
5732	18358	31063	1.79	1.0E-115	11425128	NT	Homo sapiens similar to ER to nucleus signalling 1 (H. sapiens) (LOC63433), mRNA
5732	18358	31064	1.79	1.0E-115	11425128	NT	Homo sapiens similar to ER to nucleus signalling 1 (H. sapiens) (LOC63433), mRNA
5869	18491	31217	1.1	1.0E-115	AJ928799.1	EST_HUMAN	au84g01.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2518568 3' similar to gb:U7807
5869	18491	31218	1.1	1.0E-115	AJ928799.1	EST_HUMAN	au84g01.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2518568 3' similar to gb:U7807
6408	19011	31793	0.69	1.0E-115	11428786	NT	DYNAMIN-1 (HUMAN);
6408	19011	31794	0.69	1.0E-115	11428786	NT	Homo sapiens sperm surface protein (HSS), mRNA
6529	19129	31923	20.52	1.0E-115	11428038	NT	Homo sapiens sperm surface protein (HSS), mRNA
6849	19245	32047	1.74	1.0E-115	7681893	NT	Homo sapiens similar to ribosomal protein S28 (H. sapiens) (LOC63436), mRNA
6849	19245	32048	1.74	1.0E-115	7681893	NT	Homo sapiens KIAA0054 gene product: Helicase (KIAA0054), mRNA
7014	19512	32333	0.69	1.0E-115	T86774.1	EST_HUMAN	Homo sapiens KIAA0054 gene product: Helicase (KIAA0054), mRNA
7322	19849	32709	1.16	1.0E-115	AJ076598.1	EST_HUMAN	yd86b08.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:15095 5' similar to SP:DP0G_YEAST P15801 DNA POLYMERASE GAMMA ;
7322	19849	32710	1.16	1.0E-115	AJ076598.1	EST_HUMAN	oz31a06.x1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:1678914 3'
7322	19849	32710	1.16	1.0E-115	AJ076598.1	EST_HUMAN	oz31a06.x1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:1678914 3'

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7438	19962	32828	6.85	1.0E-115	AB023212.1	NT	Homo sapiens mRNA for KIA00895 protein, partial cds
8101	20642	33553	12.93	1.0E-115	BE830187.1	EST_HUMAN	RC6-ET0081-130700-011-G01 ET0081 Homo sapiens cDNA
8101	20642	33554	12.93	1.0E-115	BE830187.1	EST_HUMAN	RC6-ET0081-130700-011-G01 ET0081 Homo sapiens cDNA
8747	21286	34207	4.14	1.0E-115	11434772	NT	Homo sapiens eukaryotic translation initiation factor 4B (EIF4B), mRNA
9690	22189	35162	0.58	1.0E-115	BF382029.1	EST_HUMAN	601816352F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4050108 5'
9910	22407	35382	2.13	1.0E-115	AB002336.1	NT	Human mRNA for KIA00338 gene, partial cds
9910	22407	35383	2.13	1.0E-115	AB002336.1	NT	Human mRNA for KIA00338 gene, partial cds
10414	22908	35906	1.08	1.0E-115	A1221878.1	EST_HUMAN	qg99e09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1843336 3'
10414	22908	35907	1.08	1.0E-115	A1221878.1	EST_HUMAN	qg99e09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1843336 3'
10420	22914	35914	0.68	1.0E-115	A1524687.1	EST_HUMAN	th12a07.x1 NCL_CGAP_CL11 Homo sapiens cDNA clone IMAGE:2118036 3' similar to TR:O16129 O16129
10448	22942	35952	0.79	1.0E-115	BE888285.1	EST_HUMAN	PHENYLALANINE TRNA SYNTHETASE
10596	23130	36144	3.79	1.0E-115	AW571544.1	EST_HUMAN	601509879F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3911610 5'
11140	23648	36689	1.94	1.0E-115	BE045890.1	EST_HUMAN	xx32f08.x1 NCL_CGAP_U11 Homo sapiens cDNA clone IMAGE:289239 3' similar to SW:CAYP_CANFA
11140	23648	36690	1.94	1.0E-115	BE045890.1	EST_HUMAN	h954c10.x1 NCL_CGAP_Pan3 Homo sapiens cDNA clone IMAGE:3123186 3' similar to TR:O88378 O88378
11276	23729	36784	2.64	1.0E-115	BE045890.1	EST_HUMAN	PRP4 PROTEIN KINASE HOMOLOG
11698	24111		1.46	1.0E-115	AF240786.1	NT	h954c10.x1 NCL_CGAP_Pan3 Homo sapiens cDNA clone IMAGE:3123186 3' similar to TR:O88378 O88378
598	13227	25701	2.19	1.0E-116	BE275502.1	EST_HUMAN	PRP4 PROTEIN KINASE HOMOLOG
833	13450	25957	1.23	1.0E-116	4507334	NT	Homo sapiens calcium channel, voltage-dependent, alpha 1E subunit (CACNA1E) mRNA
892	13506		0.9	1.0E-116	4507334	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
2040	14922	27190	3.39	1.0E-116	5174478	NT	601121347F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2988875 5'
2040	14922	27191	3.39	1.0E-116	5174478	NT	Homo sapiens synaptotagmin 1 (SYNJ1), mRNA
2072	14652	27224	1.95	1.0E-116	AJ133080.1	EST_HUMAN	Homo sapiens synaptotagmin 1 (SYNJ1), mRNA
2145	15458	27293	2.87	1.0E-116	M19824.1	NT	Homo sapiens pericentrin (PCNT) mRNA
2145	15458	27294	2.87	1.0E-116	M19824.1	NT	Homo sapiens pericentrin (PCNT) mRNA
2346	14917	27491	1.87	1.0E-116	5453941	NT	Homo sapiens pericentrin (PCNT) mRNA
2380	14949		0.97	1.0E-116	U78308.1	NT	Homo sapiens pericentrin (PCNT) mRNA
2497	15061	27635	2.84	1.0E-116	AB018333.1	NT	Human apolipoprotein B-100 (apoB) gene, exons 17 and 18
2762	15404	27883	2.18	1.0E-116	BE889256.1	EST_HUMAN	Human apolipoprotein B-100 (apoB) gene, exons 17 and 18
							Homo sapiens protein phosphatase, EF hand calcium-binding domain 1 (PPEF1) mRNA
							Human olfactory receptor offir17-201-1 (OR17-201-1) gene, olfactory receptor offir17-32 (OR17-32) gene and olfactory receptor pseudo offir17-01 (OR17-01) pseudogene, complete cds
							Homo sapiens mRNA for KIA00790 protein, partial cds
							601513337F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3914600 5'



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3209	15821	28298	4.18	1.0E-116	L77570.1	NT	Homo sapiens DiGeorge syndrome critical region, centromeric end
3209	15821	28297	4.18	1.0E-116	L77570.1	NT	Homo sapiens DiGeorge syndrome critical region, centromeric end
4487	17053	29497	2.11	1.0E-116	5031954	NT	Homo sapiens sodium phosphate transporter 3 (NPT3) mRNA
4981	17555	29997	1.86	1.0E-116	A1807086.1	EST_HUMAN	PM-BT135-070499-016 BT135 Homo sapiens cDNA
5363	17823	30337	0.88	1.0E-116	AJ243213.1	NT	Homo sapiens partial 5-HT4 receptor gene, exons 2 to 5
5483	18117	30525	0.82	1.0E-116	AJ302082.1	EST_HUMAN	q119d04.x1 NC1_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1898895 3' similar to contains element MER25 repetitive element;
6132	18746	31502	2.1	1.0E-116	W42822.1	EST_HUMAN	zc24d07.r1 Soares_senescent_fibroblasts_NHMF Homo sapiens cDNA clone IMAGE:323245 5' similar to SW:MDHM_MOUSE P08249 MALATE DEHYDROGENASE, MITOCHONDRIAL PRECURSOR;
6359	18963	31740	1.81	1.0E-116	AB046856.1	NT	Homo sapiens mRNA for KIAA1636 protein, partial cds
6359	18963	31741	1.81	1.0E-116	AB046856.1	NT	Homo sapiens mRNA for KIAA1636 protein, partial cds
6423	19026	31809	1.14	1.0E-116	BE408097.1	EST_HUMAN	601302281F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3638764 5'
6530	19130	31924	1.98	1.0E-116	BF677910.1	EST_HUMAN	602084730F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4248087 5'
6637	19233		1.82	1.0E-116	BE158133.1	EST_HUMAN	MR2-HT0379-210200-102-b04 HT0379 Homo sapiens cDNA
7023	19557	32382	2.08	1.0E-116	C02844.1	EST_HUMAN	C02844 Human heart cDNA (YNakamura) Homo sapiens cDNA clone 3NHCO587
7254	19782	32638	7.16	1.0E-116	AV716314.1	EST_HUMAN	AV716314 DCB Homo sapiens cDNA clone DOBBOCG06 5'
8310	20851	33775	1.4	1.0E-116	AA354256.1	EST_HUMAN	EST62885 Jurkat T-cells V Homo sapiens cDNA 5' end similar to similar to keratin 2
8310	20851	33776	1.4	1.0E-116	AA354256.1	EST_HUMAN	EST62885 Jurkat T-cells V Homo sapiens cDNA 5' end similar to similar to keratin 2
8416	20956	33873	1.49	1.0E-116	A1904151.1	EST_HUMAN	CM-BT043-090298-075 BT043 Homo sapiens cDNA
8888	21407	34331	1.15	1.0E-116	BE565507.1	EST_HUMAN	601338268F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3680880 5'
9028	21565	34494	2.75	1.0E-116	A1216352.1	EST_HUMAN	q109c05.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1844168 3' similar to gb:X63741_ma1 FIBULIN-1, ISOFORM A PRECURSOR (HUMAN);
9582	22092	35056	1.38	1.0E-116	A1216352.1	NT	Homo sapiens laminin, alpha 2 (merosin, congenital muscular dystrophy) (LAMA2), mRNA
10171	22666	35661	0.67	1.0E-116	AJ277441.1	NT	Homo sapiens partial mRNA for xylosyltransferase I (XT-I gene)
10171	22666	35662	0.67	1.0E-116	AJ277441.1	NT	Homo sapiens partial mRNA for xylosyltransferase I (XT-I gene)
10250	22745	35733	0.82	1.0E-116	BE158913.1	EST_HUMAN	QV4-HT0401-281289-063-c09 HT0401 Homo sapiens cDNA
10587	23103	38117	3.89	1.0E-116	BF335849.1	EST_HUMAN	CM2-CT0482-300800-349-e06 CT0482 Homo sapiens cDNA
11015	23528	36565	3.63	1.0E-116	A1367140.1	EST_HUMAN	q141e04.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1935102 3' similar to WP:B0495.7 CE01765;
12456	24948		3.62	1.0E-116	AL134889.1	EST_HUMAN	DKFZ762L1110_r1 762 (synonym: hmel2) Homo sapiens cDNA clone DKFZ762L1110 5'
584	13214	25691	1.88	1.0E-117	4826636	NT	Homo sapiens acetyl-Coenzyme A carboxylase alpha (ACACA), mRNA
1116	15433	26231	1.46	1.0E-117	AF124393.1	NT	Mus musculus fragile-X-related protein 1 (Fxr1h) gene, exons 13a through 15
1288	13865	26382	0.81	1.0E-117	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1789	14379	26923	1.28	1.0E-117	AF123320.1	NT	Homo sapiens lymphocyte activation-associated protein mRNA, complete cds
1871	14457	27014	5.27	1.0E-117	M19816.1	NT	Human apolipoprotein B-100 (apoB) gene, exon 10
2252	14826	27402	1.15	1.0E-117	AW957699.1	EST_HUMAN	EST1369769 MAGE resequences, MAGE Homo sapiens cDNA
3306	15917	28394	1.53	1.0E-117	AA978114.1	EST_HUMAN	qp32c11.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1578548 3'
4062	16859	29122	8.83	1.0E-117	AA316723.1	EST_HUMAN	EST188414 HCC cell line (metastasis to liver in mouse) Homo sapiens cDNA 5' end similar to ribosomal protein L29
4436	17022	29462	2.27	1.0E-117	8659564	NT	Homo sapiens collagen, type IV, alpha 5 (Alport syndrome) (COL4A5), mRNA
4677	17259	29710	2.1	1.0E-117	AL042120.1	EST_HUMAN	DKFZp434C1120_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434C1120 5'
4933	17508	29855	10.14	1.0E-117	AF134304.2	NT	Homo sapiens Scar2 (SCAR2) gene, partial cds
4933	17508	29856	10.14	1.0E-117	AF134304.2	NT	Homo sapiens Scar2 (SCAR2) gene, partial cds
5074	17647	30088	3.29	1.0E-117	AB020673.1	NT	Homo sapiens mRNA for KIAA0866 protein, complete cds
5551	18183	30598	3.8	1.0E-117	BE730508.1	EST_HUMAN	601562657F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3832214 5'
7473	19895	32859	5.22	1.0E-117	L76571.1	NT	Homo sapiens nuclear hormone receptor (shp) gene, 3' end of cds
7473	19895	32860	5.22	1.0E-117	L76571.1	NT	Homo sapiens nuclear hormone receptor (shp) gene, 3' end of cds
7550	20069	32944	4.48	1.0E-117	AV717788.1	EST_HUMAN	AV717788 DCB Homo sapiens cDNA clone DCBBAE01 5'
7550	20069	32945	4.48	1.0E-117	AV717788.1	EST_HUMAN	AV717788 DCB Homo sapiens cDNA clone DCBBAE01 5'
7919	20461	33367	3.77	1.0E-117	AI950145.1	EST_HUMAN	wp86b07.x1 NCI_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2488629 3' similar to TR:O75065 O75065 KIAA0477 PROTEIN ;
8253	20794	33711	1.07	1.0E-117	10834989	NT	Homo sapiens neural cell adhesion molecule 1 (NCAM1), mRNA
8253	20794	33712	1.07	1.0E-117	10834989	NT	Homo sapiens neural cell adhesion molecule 1 (NCAM1), mRNA
8350	20891	33811	1.32	1.0E-117	AI904151.1	EST_HUMAN	CM-BT043-090299-075 BT043 Homo sapiens cDNA
8350	20891	33812	1.32	1.0E-117	AI904151.1	EST_HUMAN	CM-BT043-090299-075 BT043 Homo sapiens cDNA
9223	21739	34682	1.73	1.0E-117	D16524.1	NT	Human gene for very low density lipoprotein receptor, exon 11
9701	22200	35172	1.71	1.0E-117	BE733922.1	EST_HUMAN	601568317F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3843748 5'
9857	24796	35335	0.63	1.0E-117	AF099033.1	NT	Homo sapiens gamma-aminobutyric acid type B receptor 2 (GABABR2) mRNA, complete cds
10482	22956	35987	1.98	1.0E-117	11420222	NT	Homo sapiens Drosophila Kelch like protein (DKECHL), mRNA
10737	23262	36277	1.89	1.0E-117	D83776.1	NT	Human mRNA for KIAA0191 gene, partial cds
10901	23421	36439	1.81	1.0E-117	W80605.1	EST_HUMAN	zd83b11.r1 Soares_fetal heart NB-H19W Homo sapiens cDNA clone IMAGE:347229 5' similar to gbM14219 BONE PROTEOGLYCAN II PRECURSOR (HUMAN);
10917	23436	36456	1.65	1.0E-117	11424835	NT	Homo sapiens protein (peptidyl-prolyl cis/trans isomerase) NIMA-interacting 1 (PIN1), mRNA
10917	23436	36457	1.65	1.0E-117	11424835	NT	Homo sapiens protein (peptidyl-prolyl cis/trans isomerase) NIMA-interacting 1 (PIN1), mRNA
11153	23660	36704	3.46	1.0E-117	AB011541.1	NT	Homo sapiens mRNA for MEGF8, partial cds
11153	23660	36705	3.46	1.0E-117	AB011541.1	NT	Homo sapiens mRNA for MEGF8, partial cds
11272	23725		31.65	1.0E-117	BE269566.1	EST_HUMAN	601186203F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3544296 5'

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11464	23914	36981	2.04	1.0E-117	4501848	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABCA3), mRNA
11464	23914	36982	2.04	1.0E-117	4501848	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABCA3), mRNA
11936	25026		1.7	1.0E-117	AF224689.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
12662	15433	26231	1.81	1.0E-117	AF124393.1	NT	Mus musculus fragile-X-related protein 1 (Fxr1h) gene, exons 13a through 15
74	12752	25231	8.91	1.0E-118	AF161500.1	NT	Homo sapiens HSPC151 mRNA, complete cds
99	12775	25257	0.88	1.0E-118	AL045654.1	EST_HUMAN	DKFZp434i056_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434i056 5'
543	13174	25654	5.79	1.0E-118	7857016	NT	Homo sapiens hypothetical protein (DJ328E19.C1.1), mRNA
947	15429	26073	1.3	1.0E-118	5174680	NT	Homo sapiens sine oculus homeobox (Drosophila) homolog 1 (SIX1) mRNA
2275	14849	27425	1.93	1.0E-118	BE389705.1	EST_HUMAN	601281947F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3604019 5'
2275	14849	27426	1.93	1.0E-118	BE389705.1	EST_HUMAN	601281947F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3604019 5'
2275	14849	27427	1.93	1.0E-118	BE389705.1	EST_HUMAN	601281947F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3604019 5'
2367	14938		0.88	1.0E-118	AW951729.1	EST_HUMAN	EST363789 MAGE resequences, MAGB Homo sapiens cDNA
2768	15322	27888	2.82	1.0E-118	U07000.1	NT	Human breakpoint cluster region (BCR) gene, complete cds
2768	15322	27889	2.82	1.0E-118	U07000.1	NT	Human breakpoint cluster region (BCR) gene, complete cds
3138	15752		4.01	1.0E-118	Y13932.1	NT	Homo sapiens PRKY exon 7
3229	15841	28321	6.49	1.0E-118	A1347694.1	EST_HUMAN	qp01f05.x1 NCI CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1916769 3'
3229	15841	28322	6.49	1.0E-118	A1347694.1	EST_HUMAN	qp01f05.x1 NCI CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1916769 3'
4162	16753	29204	9.69	1.0E-118	D23660.1	NT	Human mRNA for ribosomal protein, complete cds
4817	17395	29848	1.45	1.0E-118	11425783	NT	Homo sapiens KIAA0478 gene product (KIAA0478), mRNA
5616	18245	30695	1.89	1.0E-118	AF142624.1	NT	Homo sapiens calcium channel gamma 4 subunit (CACNG4) gene, exon 3
5616	18245	30696	1.89	1.0E-118	AF142624.1	NT	Homo sapiens calcium channel gamma 4 subunit (CACNG4) gene, exon 3
5813	18437	31158	1.01	1.0E-118	11422054	NT	Homo sapiens reelin (RELN), mRNA
5813	18437	31159	1.01	1.0E-118	11422054	NT	Homo sapiens reelin (RELN), mRNA
5890	18513	31239	0.77	1.0E-118	U08892.1	NT	Human GS2 gene, exon 6
5890	18513	31240	0.77	1.0E-118	U08892.1	NT	Human GS2 gene, exon 6
5944	18564	31294	0.92	1.0E-118	M55109.1	NT	Human cystic fibrosis transmembrane conductance regulator (CFTR) gene, exon 4
6023	18842	31383	1.2	1.0E-118	11425900	NT	Homo sapiens T-box 4 (TBX4), mRNA
6023	18842	31384	1.2	1.0E-118	11425900	NT	Homo sapiens T-box 4 (TBX4), mRNA
6098	18714	31464	1.4	1.0E-118	11420764	NT	Homo sapiens transient receptor potential channel 5 (TRPC5), mRNA
6793	19384	32199	1.58	1.0E-118	4557732	NT	Homo sapiens latent transforming growth factor beta binding protein 2 (LTBP2) mRNA
6793	19384	32200	1.58	1.0E-118	4557732	NT	Homo sapiens latent transforming growth factor beta binding protein 2 (LTBP2) mRNA
7154	19686	32528	1.03	1.0E-118	AL043761.1	EST_HUMAN	DKFZp434O0127_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434O0127 5'
7154	19686	32529	1.03	1.0E-118	AL043761.1	EST_HUMAN	DKFZp434O0127_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434O0127 5'

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Table 4

Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7597	20111	32988	4.89	1.0E-118	11431050	NT	Homo sapiens chromosome 2 open reading frame 3 (C2ORF3), mRNA
7609	20122	32999	0.7	1.0E-118	L48560.1	NT	Homo sapiens very long chain acyl-CoA dehydrogenase gene, exons 1-20, complete cds
7913	20455	33361	2.75	1.0E-118	BE781223.1	EST_HUMAN	601469159F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3872247 5'
8323	20864	33788	6.08	1.0E-118	BE062855.1	EST_HUMAN	QV0-BT0263-090200-097-h03 BT0263 Homo sapiens cDNA
8323	20864	33789	6.06	1.0E-118	BE062855.1	EST_HUMAN	QV0-BT0263-090200-097-h03 BT0263 Homo sapiens cDNA
8328	20869	33792	1.44	1.0E-118	AA443024.1	EST_HUMAN	z98d07.r1 Soares_NHHMPu_S1 Homo sapiens cDNA clone IMAGE:811789 5'
8328	20869	33793	1.44	1.0E-118	AA443024.1	EST_HUMAN	z98d07.r1 Soares_NHHMPu_S1 Homo sapiens cDNA clone IMAGE:811789 5'
8607	21146	34061	0.89	1.0E-118	AB002381.1	NT	Human mRNA for KIAA0383 gene, partial cds
8607	21146	34062	0.89	1.0E-118	AB002381.1	NT	Human mRNA for KIAA0383 gene, partial cds
8655	21194	34112	1.61	1.0E-118	4557732	NT	Homo sapiens latent transforming growth factor beta binding protein 2 (LTBP2) mRNA
8655	21194	34113	1.61	1.0E-118	4557732	NT	Homo sapiens latent transforming growth factor beta binding protein 2 (LTBP2) mRNA
8965	21503	34425	5.31	1.0E-118	BE263134.1	EST_HUMAN	601144863F2 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3160502 5'
8966	21534	34464	0.52	1.0E-118	AL048474.2	EST_HUMAN	DKFZp566K1824_r1 586 (synonym: hute1) Homo sapiens cDNA clone DKFZp566K1824
9512	22012	34971	1.62	1.0E-118	7657018	NT	Homo sapiens hypothetical protein (DJ328E19.C1.1), mRNA
9897	22394	35370	0.62	1.0E-118	AL138321.1	EST_HUMAN	DKFZp5470017_r1 547 (synonym: hfb1) Homo sapiens cDNA clone DKFZp5470017 5'
10237	22732	35723	0.98	1.0E-118	BE736213.1	EST_HUMAN	601307146F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3641603 5'
10237	22732	35724	0.98	1.0E-118	BE736213.1	EST_HUMAN	601307146F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3641603 5'
10277	22772	35761	1.8	1.0E-118	BF195407.1	EST_HUMAN	7n17e09.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:3564785 3' similar to SW:ZP3A_HUMAN
10425	22919	35921	0.52	1.0E-118	AW296351.1	EST_HUMAN	P21754 ZONA PELLUCIDA SPERM-BINDING PROTEIN 3A PRECURSOR ;
11157	23664	36710	4.87	1.0E-118	AA315007.1	EST_HUMAN	UJH-BW0-ao-a-07-01J.s1 NCI_CGAP_Sub6 Homo sapiens cDNA clone IMAGE:2729772 3'
11433	23883	36949	1.94	1.0E-118	BE908676.1	EST_HUMAN	EST186814 HCC cell line (metastasis to liver in mouse) II Homo sapiens cDNA 5' end similar to dynein, light chain 1, cytoplasmic
11433	23883	36950	1.94	1.0E-118	BE908676.1	EST_HUMAN	601499514F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3901563 5'
11436	23886	36953	1.69	1.0E-118	BF093687.1	EST_HUMAN	601499514F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3901563 5'
11436	23886	36954	1.69	1.0E-118	BF093687.1	EST_HUMAN	QV0-UM0091-120900-385-b12 UM0091 Homo sapiens cDNA
11606	24049	37115	1.58	1.0E-118	BE218235.1	EST_HUMAN	QV0-UM0091-120900-385-b12 UM0091 Homo sapiens cDNA
788	13408	25911	2.89	1.0E-119	AF170492.1	NT	h36a06.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3175474 3' similar to TR:Q9Z2H4
1075	15432	26189	1.82	1.0E-119	7705607	NT	Q9Z2H4 G PROTEIN-COUPLED RECEPTOR LGR4 ;
1977	14560	27118	2.24	1.0E-119	AB023147.1	NT	Homo sapiens chloride channel CLC4 (CLC4) mRNA, complete cds
3136	15750	26218	1.04	1.0E-119	8922203	NT	Homo sapiens CGI-105 protein (LOC51011), mRNA
							Homo sapiens mRNA for KIAA0930 protein, partial cds
							Homo sapiens hypothetical protein FLJ10052 (FLJ10052), mRNA
3277	15888		0.79	1.0E-119	AA916780.1	EST_HUMAN	on10b05.s1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1556241 3' similar to WP:E04F6.2

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4026	18624	26096	1.09	1.0E-119	4504116	NT	Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1) mRNA
5540	18172	30587	3.45	1.0E-119	AU133398.1	EST_HUMAN	AU133398 NT2RP4 Homo sapiens cDNA clone NT2RP4001991 5'
5553	18185	30600	15.55	1.0E-119	M89914.1	NT	Human neurofilament (NF1) gene, complete cds
5557	18189	30605	3.01	1.0E-119	BE836121.1	EST_HUMAN	RC1-NN0073-250800-018-g06 NN0073 Homo sapiens cDNA
5625	18254	30723	1.52	1.0E-119	AV683731.1	EST_HUMAN	AV683731 GKC Homo sapiens cDNA clone GKCDH803 5'
6276	18884	31652	5.76	1.0E-119	AI150703.1	EST_HUMAN	qb77c09.x1 Soares_fetal_heart_NH19W Homo sapiens cDNA clone IMAGE:1708128 3' similar to SW:K1CJ_MOUSE P02535 KERATIN, TYPE I CYTOSKELETAL 10
6429	19032	31815	0.68	1.0E-119	AF315683.1	NT	Homo sapiens matrix metalloproteinase 28 (MMP28) mRNA, complete cds
6429	19032	31816	0.68	1.0E-119	AF315683.1	NT	Homo sapiens matrix metalloproteinase 28 (MMP28) mRNA, complete cds
6473	19074	31857	1.06	1.0E-119	AI478732.1	EST_HUMAN	tm23f10.x1 Soares_NFL_T_GBC S1 Homo sapiens cDNA clone IMAGE:2157451 3'
6588	19185	31987	2.82	1.0E-119	X06292.1	NT	Human c-fes/fps proto-oncogene
6598	19195	32000	4.9	1.0E-119	AW974193.1	EST_HUMAN	EST1386296 MAGE resequences, MAGM Homo sapiens cDNA
7440	19984	32830	1.27	1.0E-119	BE796614.1	EST_HUMAN	601592005F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3948081 5'
8596	21135	34050	0.84	1.0E-119	BE615150.1	EST_HUMAN	601280564F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3822628 5'
9670	22169	35145	0.55	1.0E-119	11545921	NT	Homo sapiens melanoma differentiation associated protein-5 (MDA5), mRNA
9821	22319	35303	1.04	1.0E-119	11036643	NT	Homo sapiens KIAA0477 gene product (KIAA0477), mRNA
10145	22840	35630	2.78	1.0E-119	AA465124.1	EST_HUMAN	aa32051r1 NCI CGAP_GCB1 Homo sapiens cDNA clone IMAGE:814977 5'
10398	22892	35888	0.92	1.0E-119	AJ297701.1	NT	Homo sapiens partial IL-12RB1 gene for IL-12 receptor beta1 chain, exons 16-17
10438	22832	35939	0.66	1.0E-119	11425837	NT	Homo sapiens hypothetical protein FLJ10206 (FLJ10206), mRNA
10438	22832	35940	0.66	1.0E-119	11425837	NT	Homo sapiens hypothetical protein FLJ10206 (FLJ10206), mRNA
10502	22896	36005	3.99	1.0E-119	AB032281.1	NT	Homo sapiens Sec mRNA for stearyl-CoA desaturase, complete cds
11082	23594		10.54	1.0E-119	BF569571.1	EST_HUMAN	602186072F1 NIH_MGC_45 Homo sapiens cDNA clone IMAGE:4310633 5'
11997	25012		3.05	1.0E-119	AW847519.1	EST_HUMAN	RC3-CT0212-240889-011-f03 CT0212 Homo sapiens cDNA
258	12917	25404	0.65	1.0E-120	AB018301.1	NT	Homo sapiens mRNA for KIAA0758 protein, partial cds
323	12977	25465	0.77	1.0E-120	4507334	NT	Homo sapiens synaptotagmin 1 (SYNJ1), mRNA
1079	13684	26185	2.62	1.0E-120	AF248540.1	NT	Homo sapiens intersectin 2 (SH3D1B) mRNA, complete cds
1079	13684	26186	2.62	1.0E-120	AF248540.1	NT	Homo sapiens intersectin 2 (SH3D1B) mRNA, complete cds
1471	14063	26598	3.24	1.0E-120	N44873.1	EST_HUMAN	yy40g12.r1 Soares melanocyte 2NH1M Homo sapiens cDNA clone IMAGE:273768 5'
1645	14237	26772	2.48	1.0E-120	AF167706.1	NT	Homo sapiens cysteine-rich repeat-containing protein S52 precursor, mRNA, complete cds
1842	14430	26883	1.94	1.0E-120	4557250	NT	Homo sapiens disintegrin and metalloprotease domain 10 (ADAM10) mRNA
3348	12977	25465	1.04	1.0E-120	4507334	NT	Homo sapiens synaptotagmin 1 (SYNJ1), mRNA
4449	17035	29478	1.68	1.0E-120	AF056490.1	NT	Homo sapiens cAMP-specific phosphodiesterase 8A (PDE8A) mRNA, partial cds
4449	17035	29479	1.68	1.0E-120	AF056490.1	NT	Homo sapiens cAMP-specific phosphodiesterase 8A (PDE8A) mRNA, partial cds
4769	17350	29801	2.82	1.0E-120	AF088463.1	NT	Homo sapiens stanniocalcin (STC) gene, partial cds

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4769	17350	29802	2.82	1.0E-120	AF098463.1	NT	Homo sapiens stanniocalcin (STC) gene, partial cds
5150	17720	30151	1.11	1.0E-120	AF054821.1	NT	Homo sapiens cytochrome P-450 mRNA, complete cds
5442	17997		0.95	1.0E-120	AL163213.2	NT	Homo sapiens chromosome 21 segment HS21C013
5911	18533	31258	13.5	1.0E-120	BF568222.1	EST_HUMAN	602183994F1 NIH_MGC_42 Homo sapiens cDNA clone IMAGE:4300174 5'
5911	18533	31259	13.5	1.0E-120	BF568222.1	EST_HUMAN	602183994F1 NIH_MGC_42 Homo sapiens cDNA clone IMAGE:4300174 5'
7573	20089	32965	1.78	1.0E-120	D34619.1	NT	Human TBXAS1 gene for thromboxane synthase, exon 7
7835	20377	33282	1.81	1.0E-120	Y00067.1	NT	Human gene for neurofilament subunit M (NF-M)
7835	20377	33283	1.81	1.0E-120	Y00067.1	NT	Human gene for neurofilament subunit M (NF-M)
8274	20815	33737	2.9	1.0E-120	BF337599.1	EST_HUMAN	602035352F1 NC1_CGAP_Bm64 Homo sapiens cDNA clone IMAGE:4183333 5'
8343	20884	33805	0.8	1.0E-120	AB033057.1	NT	Homo sapiens mRNA for KIAA1231 protein, partial cds
8343	20884	33806	0.8	1.0E-120	AB033057.1	NT	Homo sapiens mRNA for KIAA1231 protein, partial cds
8347	20888	33808	2.83	1.0E-120	AB007964.1	NT	Homo sapiens mRNA, chromosome 1 specific transcript KIAA0495
8347	20888	33809	2.83	1.0E-120	AB007964.1	NT	Homo sapiens mRNA, chromosome 1 specific transcript KIAA0495
8390	20930	33850	1.13	1.0E-120	AB007964.1	NT	Homo sapiens mRNA for KIAA0485 protein, partial cds
9421	21930	34877	4.6	1.0E-120	BE392102.1	EST_HUMAN	601307739F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3625544 5'
9421	21930	34878	4.6	1.0E-120	BE392102.1	EST_HUMAN	601307739F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3625544 5'
9660	22159	35131	3.07	1.0E-120	BF306541.1	EST_HUMAN	601888956F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4122876 5'
9675	22174	35150	8.09	1.0E-120	AU133205.1	EST_HUMAN	AU133205 NT2RP4 Homo sapiens cDNA clone NT2RP4001541 5'
9692	22191	35165	0.69	1.0E-120	AL049801.1	NT	Novel human gene mapping to chromosome 13, similar to rat RhoGAP
9988	22483	35469	2.88	1.0E-120	AB029000.1	NT	Homo sapiens mRNA for KIAA1077 protein, partial cds
11006	23520	36555	14.73	1.0E-120	BE296387.1	EST_HUMAN	601176727F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3532015 5'
11222	23753	36810	2.12	1.0E-120	BE867619.1	EST_HUMAN	601443135F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3847281 5'
11222	23753	36811	2.12	1.0E-120	BE867619.1	EST_HUMAN	601443135F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3847281 5'
11504	23953	37021	1.55	1.0E-120	U94774.1	NT	Human muscle glycogen phosphorylase (PYGM) gene, 5'UTR and exon 1
12153	24395	30975	1.31	1.0E-120	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
77	12754	25235	0.92	1.0E-121	Y18000.1	NT	Homo sapiens NIF2 gene
401	13045	25536	1.68	1.0E-121	AU134963.1	EST_HUMAN	AU134963 PLACE1 Homo sapiens cDNA clone PLACE1000899 5'
753	15423	25867	1.19	1.0E-121	5032192	NT	Homo sapiens TNF receptor-associated factor 1 (TRAF1) mRNA
2008	14590	27150	0.98	1.0E-121	4755139	NT	Homo sapiens inositol polyphosphate-4-phosphatase, type I, 107KD (INPP4A), splice variant a, mRNA
2008	14590	27151	0.98	1.0E-121	4755139	NT	Homo sapiens inositol polyphosphate-4-phosphatase, type I, 107KD (INPP4A), splice variant a, mRNA
2150	14727	27300	1.74	1.0E-121	L76931.1	NT	Homo sapiens metabotropic glutamate receptor 1 beta (mGluR1beta) mRNA, complete cds
2996	15612	28092	1.03	1.0E-121	AF111168.2	NT	Homo sapiens serine palmitoyl transferase, subunit II gene, complete cds; and unknown genes

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3117	15731	28201	3.63	1.0E-121	Y19208.1	NT	Homo sapiens hHb3 gene for hair keratin, exons 1 to 9
3117	15731	28202	3.63	1.0E-121	Y19208.1	NT	Homo sapiens hHb3 gene for hair keratin, exons 1 to 9
3589	16193	28677	0.94	1.0E-121	AB037758.1	NT	Homo sapiens mRNA for KIAA1337 protein, partial cds
3589	16193	28678	0.94	1.0E-121	AB037758.1	NT	Homo sapiens mRNA for KIAA1337 protein, partial cds
3741	16342	28810	8.78	1.0E-121	AF155156.2	NT	Homo sapiens adaptor-related protein complex AP-4 epsilon subunit mRNA, complete cds
4424	17009	28452	1.42	1.0E-121	A1263294.1	EST_HUMAN	qx57501.x1 NCI_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2005417 3'
5112	17684	30120	3.54	1.0E-121	X91937.1	NT	H. sapiens ECE-1 gene (exon 17)
5472	18106	30425	1.02	1.0E-121	BE222250.1	EST_HUMAN	hu09708.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3168119 3'
5750	18376	31088	0.69	1.0E-121	BE271424.1	EST_HUMAN	601140485F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3048820 5'
6968	19545		1.06	1.0E-121	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region; segment 2/2
7042	18062	30451	0.75	1.0E-121	AW698086.1	EST_HUMAN	RC3-NN0066-270400-011-402 NN0066 Homo sapiens cDNA
7042	18062	30452	0.75	1.0E-121	AW698086.1	EST_HUMAN	RC3-NN0066-270400-011-402 NN0066 Homo sapiens cDNA
7878	20420	33328	1.86	1.0E-121	11436217	NT	Homo sapiens gemme-aminobutyric acid (GABA) A receptor, alpha 2 (GABRA2), mRNA
7882	20424	33332	2.19	1.0E-121	DB4122.1	NT	Homo sapiens DNA for prostacyclin synthase, exon 8
7882	20424	33333	2.19	1.0E-121	DB4122.1	NT	Homo sapiens DNA for prostacyclin synthase, exon 8
9772	22270	35254	0.9	1.0E-121	AW583858.1	EST_HUMAN	ie05g05.y1 Human Pancreatic Islets Homo sapiens cDNA 5' similar to TR:O75457 O75457 CYTOSOLIC PHOSPHOLIPASE A2-GAMMA. ;
9772	22270	35255	0.9	1.0E-121	AW583858.1	EST_HUMAN	ie05g05.y1 Human Pancreatic Islets Homo sapiens cDNA 5' similar to TR:O75457 O75457 CYTOSOLIC PHOSPHOLIPASE A2-GAMMA. ;
10655	23187	36203	3.45	1.0E-121	11427788	NT	Homo sapiens COX11 (yeast) homolog, cytochrome c oxidase assembly protein (COX11), mRNA
10682	23194	36209	4.2	1.0E-121	AF084200.1	NT	Homo sapiens UDP-glucuronosyltransferase 2B4 precursor (UGT2B4) mRNA, UGT2B4*E438 allele, complete cds
10848	23369	36398	3.51	1.0E-121	7330334	NT	Homo sapiens chloride intracellular channel 4 like (CLIC4L), mRNA
10875	23386	36412	2.11	1.0E-121	N59824.1	EST_HUMAN	y74c01.s1 Soares fetal liver spleen 1NLS Homo sapiens cDNA clone IMAGE:2484448 3'
289	12945	25430	1.68	1.0E-122	11526176	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1), mRNA
358	13007	25490	3.01	1.0E-122	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
380	13027	25515	1.61	1.0E-122	11526176	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1), mRNA
915	13528	26047	5.29	1.0E-122	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
1262	13859	26376	4.63	1.0E-122	M20707.1	NT	Human kappa-immunoglobulin germline pseudogene (Chr22.4) variable region (subgroup V kappa II)
1731	14322	26884	1.08	1.0E-122	AF167706.1	NT	Homo sapiens cysteine-rich repeat-containing protein S52 precursor, mRNA, complete cds
1750	14340	26887	1.8	1.0E-122	11418424	NT	Homo sapiens collagen, type XII, alpha 1 (COL12A1), mRNA
1750	14340	26888	1.8	1.0E-122	11418424	NT	Homo sapiens collagen, type XII, alpha 1 (COL12A1), mRNA
1850	14438	26895	6.15	1.0E-122	BE906024.1	EST_HUMAN	601497032F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3898358 5'

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2533	15097	27669	5.48	1.0E-122	BF316170.1	EST_HUMAN	601896173F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4125234 5'
2533	15097	27670	5.48	1.0E-122	BF316170.1	EST_HUMAN	601896173F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4125234 5'
2864	15483	27957	1.11	1.0E-122	AF284717.1	NT	Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-DSP2 mRNA, complete cds
4972	17546	29988	1.23	1.0E-122	4502168	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
5127	17899		1.26	1.0E-122	AW504645.1	EST_HUMAN	U1HF-BND-03-03-0.U1.1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3079948 5'
5752	18378	31089	1.36	1.0E-122	BE256039.1	EST_HUMAN	601113567F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3354232 5'
6853	18378	31089	6.96	1.0E-122	BE256039.1	EST_HUMAN	601113567F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3354232 5'
7266	19794	32650	0.68	1.0E-122	AA868671.1	EST_HUMAN	ak49h06.s1 Soares, testis, NHT Homo sapiens cDNA clone IMAGE:1409339 3'
8731	21270	34169	0.55	1.0E-122	AJ276801.1	NT	Homo sapiens mRNA for doublesex and mab-3 related transcription factor 1 (DMRT1)
8958	21496	34419	1.37	1.0E-122	11424218	NT	Homo sapiens lethal giant larvae (Drosophila) homolog 2 (LLGL2), mRNA
9247	21773	34723	0.9	1.0E-122	A1359618.1	EST_HUMAN	q32h07.x1 NCL_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:2013757 3' similar to SW:MTA1_HUMAN Q13330 METASTASIS-ASSOCIATED PROTEIN MTA1.;
9247	21773	34724	0.9	1.0E-122	A1359618.1	EST_HUMAN	q32h07.x1 NCL_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:2013757 3' similar to SW:MTA1_HUMAN Q13330 METASTASIS-ASSOCIATED PROTEIN MTA1.;
10040	22535	35531	0.71	1.0E-122	AL117234.1	NT	Novel human gene mapping to chromosome X, isoform of dcl (proto-oncogene)
10868	23387	36402	1.55	1.0E-122	AW955834.1	EST_HUMAN	EST367904 MAGE resequences, MAGO Homo sapiens cDNA
11738	24141	25347	3.99	1.0E-122	11418187	NT	Homo sapiens phosphomannomutase 1 (PMM1), mRNA
202	12863	25347	19.89	1.0E-123	U31519.1	NT	Human phosphoenolpyruvate carboxykinase (PCK1) gene, promoter region and partial cds
800	13417	25921	2.06	1.0E-123	BF345274.1	EST_HUMAN	602018058F1 NCL_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4153670 5'
800	13417	25922	2.06	1.0E-123	BF345274.1	EST_HUMAN	602018058F1 NCL_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4153670 5'
1051	13658	26169	5.07	1.0E-123	AL163249.2	NT	Homo sapiens chromosome 21 segment HS21C049
1060	13665	26176	5.53	1.0E-123	5803114	NT	Homo sapiens inner membrane protein, mitochondrial (mitofilin) (IMMT), mRNA
1281	13876	26397	4.2	1.0E-123	4505818	NT	Homo sapiens phosphatidylinositol-4-phosphate 5-kinase, type II, beta (PIP5K2B) mRNA, and translated products
1281	13876	26398	4.2	1.0E-123	4505818	NT	Homo sapiens phosphatidylinositol-4-phosphate 5-kinase, type II, beta (PIP5K2B) mRNA, and translated products
2147	14724	27296	3.41	1.0E-123	M55419.1	NT	Human amelogenin (AMELY) gene, 3' end of cds
2147	14724	27297	3.41	1.0E-123	M55419.1	NT	Human amelogenin (AMELY) gene, 3' end of cds
2147	14724	27298	3.41	1.0E-123	M55419.1	NT	Human amelogenin (AMELY) gene, 3' end of cds
2354	14925		5.59	1.0E-123	7705962	NT	Homo sapiens RAB9-like protein (LOC51209), mRNA
3288	15899	28378	0.67	1.0E-123	6912617	NT	Homo sapiens glutamyl-peptide cyclotransferase (glutamyl cyclase) (QPCT), mRNA
5638	18267	30739	1.6	1.0E-123	L34219.1	NT	Homo sapiens retinaldehyde-binding protein (CRALBP) gene, complete cds



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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5638	18287	30740	1.6	1.0E-123	L34218.1	NT	Homo sapiens retinaldehyde-binding protein (RALBP) gene, complete cds
5769	18395	31109	1.33	1.0E-123	BE799746.1	EST_HUMAN	601591108F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3945433 5'
6595	18182	31997	2.14	1.0E-123	AU118435.1	EST_HUMAN	AU118435 HEMBA1 Homo sapiens cDNA clone HEMBA1003591 5'
7076	19648	32488	0.71	1.0E-123	H53198.1	EST_HUMAN	Y84e03.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:202444 5' similar to SP:YAK1_YEAST P14680 PROTEIN KINASE YAK1 ;
7084	19655	32494	1.22	1.0E-123	U42224.1	NT	Human growth hormone releasing hormone gene, exon 7
7245	19774	32831	0.68	1.0E-123	U52558.1	NT	Human hBRAVOIN-CAM precursor (hBRAVOIN-CAM) gene, complete cds
7433	19957	32822	0.73	1.0E-123	11525833	NT	Homo sapiens heparan sulfate (glucosamine) 3-O-sulfotransferase 2 (HS3ST2), mRNA
7638	20150	33034	1.31	1.0E-123	11436439	NT	Homo sapiens 2'-5'-oligoadenylate synthetase 2 (OAS2), mRNA
7647	20159	33048	1.79	1.0E-123	BE263001.1	EST_HUMAN	601152815F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3509182 5'
7764	20272	33170	0.8	1.0E-123	N35841.1	EST_HUMAN	Y89d11.r1 Soares melanocyte 2NbhM Homo sapiens cDNA clone IMAGE:268917 5' similar to PIR:S49811
7764	20272	33171	0.8	1.0E-123	N35841.1	EST_HUMAN	S49811 protein kinase Pkpa - Phymomyces blakesleeanus ;
8472	21012		2.25	1.0E-123	AW371924.1	EST_HUMAN	Y89d11.r1 Soares melanocyte 2NbhM Homo sapiens cDNA clone IMAGE:268917 5' similar to PIR:S49811
9291	21891	34838	2.04	1.0E-123	AB007923.1	NT	RC4-BT0311-251189-012-a07 BT0311 Homo sapiens cDNA
9424	21933	34882	39.79	1.0E-123	U09823.1	NT	Homo sapiens mRNA for KIAA0454 protein, partial cds
11567	24014	37083	5.42	1.0E-123	BF677282.1	EST_HUMAN	Oryctolagus cuniculus New Zealand white elongation factor 1 alpha (Rabefla2) mRNA, complete cds
11567	24014	37084	5.42	1.0E-123	BF677282.1	EST_HUMAN	602086781F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4250879 5'
280	12846	25431	0.93	1.0E-124	4507500	NT	602086781F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4250879 5'
280	12846	25432	0.93	1.0E-124	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
286	12852		1.2	1.0E-124	D87675.1	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
511	13144	25630	2.28	1.0E-124	AL163246.2	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
720	13340	25629	4	1.0E-124	AA397551.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C046
720	13340	25630	4	1.0E-124	AA397551.1	EST_HUMAN	Z81b04.r1 Strategene schizo brain S11 Homo sapiens cDNA clone IMAGE:728719 5' similar to TR:G300482
789	13407	25912	4.86	1.0E-124	AF155854.1	NT	G300482 POL=REVERSE TRANSCRIPTASE HOMOLOG (RETROVIRAL ELEMENT) ;
841	13457	25966	1.18	1.0E-124	4507500	NT	Z81b04.r1 Strategene schizo brain S11 Homo sapiens cDNA clone IMAGE:728719 5' similar to TR:G300482
937	13550	26068	5.09	1.0E-124	7705446	NT	G300482 POL=REVERSE TRANSCRIPTASE HOMOLOG (RETROVIRAL ELEMENT) ;
1358	13952	26479	0.62	1.0E-124	11418092	NT	Human putative ribosomal protein S1 mRNA
1391	13885	26511	6.15	1.0E-124	AF274892.1	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
1391	13885	26512	6.15	1.0E-124	AF274892.1	NT	Homo sapiens hypothetical protein (HSPC068), mRNA
							Homo sapiens ring finger protein (RNF), mRNA
							Homo sapiens glucose transporter 3 gene, exons 9, 10, and complete cds
							Homo sapiens glucose transporter 3 gene, exons 9, 10, and complete cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1851	14439	26998	3.15	1.0E-124	AJ131712.1	NT	Homo sapiens mRNA for nucleolar RNA-helicase (nol161 gene)
2107	14695	27253	1.73	1.0E-124	BE879524.1	EST_HUMAN	601491715F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3893954 5'
3537	16142	28624	0.72	1.0E-124	S78684.1	NT	Homo sapiens ATP-sensitive inwardly rectifying K-channel subunit (KCNJ6/BIR1) gene, exon
3537	16142	28625	0.72	1.0E-124	S78684.1	NT	Homo sapiens ATP-sensitive inwardly rectifying K-channel subunit (KCNJ6/BIR1) gene, exon
3967	16505	28034	0.66	1.0E-124	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
4150	16742	29196	0.8	1.0E-124	4504116	NT	Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1) mRNA
4855	17433	28884	2.18	1.0E-124	AB024089.1	NT	Homo sapiens gene for B120, exon 11
5088	17841	M18178.1	1.29	1.0E-124	M18178.1	NT	Human fibronectin gene extra type III repeat (EDII), exon x+1
5256	17819	30244	0.87	1.0E-124	AW963390.1	EST_HUMAN	EST375463 MAGE resequences, MAGH Homo sapiens cDNA
5501	18135	30545	10.59	1.0E-124	8922337	NT	Homo sapiens hypothetical protein FLJ10300 (FLJ10300), mRNA
5652	18476	31199	1.05	1.0E-124	4506786	NT	Homo sapiens IQ motif containing GTPase activating protein 1 (IQGAP1) mRNA
6048	18687	31406	6.57	1.0E-124	BF696135.1	EST_HUMAN	602124644F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4281635 5'
6317	18824	31701	0.88	1.0E-124	AV711263.1	EST_HUMAN	AV711263 Cu Homo sapiens cDNA clone CuAADF07 5'
6563	19161	31959	0.9	1.0E-124	11420654	NT	Homo sapiens ubiquitin specific protease 9, X chromosome (Drosophila fat facets related) (USP9X), mRNA
7083	19654	32493	3.45	1.0E-124	Y11717.1	NT	M.musculus mRNA for hoxa3 gene
7191	19723	32571	1.23	1.0E-124	BE271295.1	EST_HUMAN	600943771F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:2866585 5'
7191	19723	32572	1.23	1.0E-124	BE271295.1	EST_HUMAN	600943771F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:2866585 5'
7555	20074	32950	1.15	1.0E-124	AA630331.1	EST_HUMAN	ac08h05.s1 Stratiogene Hel.a cell s3 937216 Homo sapiens cDNA clone IMAGE:855897 3'
8201	20742	33655	18.99	1.0E-124	4506854	NT	Homo sapiens ribosomal protein L5 (RPL5) mRNA
8399	20939	33861	1.45	1.0E-124	AW812106.1	EST_HUMAN	hg94409.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2953240 3' similar to TR:O85162
8399	20939	33862	1.45	1.0E-124	AW812106.1	EST_HUMAN	O85162 PEROXISOMAL SHORT-CHAIN ALCOHOL DEHYDROGENASE ;
9089	21825	34580	1.42	1.0E-124	AI799864.1	EST_HUMAN	hg94409.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2953240 3' similar to TR:O85162
9089	21825	34561	1.42	1.0E-124	AI799864.1	EST_HUMAN	O85162 PEROXISOMAL SHORT-CHAIN ALCOHOL DEHYDROGENASE ;
9411	21920	34868	2.52	1.0E-124	AV645633.1	EST_HUMAN	wc43g03.x1 NCI_CGAP_Pr28 Homo sapiens cDNA clone IMAGE:2321428 3'
9411	21920	34869	2.52	1.0E-124	AV645633.1	EST_HUMAN	wc43g03.x1 NCI_CGAP_Pr28 Homo sapiens cDNA clone IMAGE:2321428 3'
9488	21968	34954	1.14	1.0E-124	AF022655.1	NT	AV645633 GLC Homo sapiens cDNA clone GLCACE04 3'
9498	21998	34955	1.14	1.0E-124	AF022655.1	NT	AV645633 GLC Homo sapiens cDNA clone GLCACE04 3'
9526	22026	34984	8.22	1.0E-124	AI767133.1	EST_HUMAN	Homo sapiens cep250 centrosome associated protein mRNA, complete cds
9526	22028	34985	8.22	1.0E-124	AI767133.1	EST_HUMAN	wib3f02.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2400891 3'
9785	22283	35269	1.66	1.0E-124	AW503755.1	EST_HUMAN	wib3f02.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2400891 3'
11213	23716	36770	3.81	1.0E-124	AW665663.1	EST_HUMAN	UI-HF-BN0-akz-b-04-0-UI.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078846 5'
							h05c06.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2980806 3'

Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11347	23045	36056	2.26	1.0E-124	AI446455.1	EST_HUMAN	q19603.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2141880 3' similar to TR:O31662 O31662 YKRS PROTEIN ;
11347	23045	36057	2.26	1.0E-124	AI446455.1	EST_HUMAN	q19603.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2141880 3' similar to TR:O31662 O31662 YKRS PROTEIN ;
11818	13340	25829	6.1	1.0E-124	AA397551.1	EST_HUMAN	z81b04.r1 Strategene schizo brain S11 Homo sapiens cDNA clone IMAGE:728719 5' similar to TR:G300482 G300482 POL=REVERSE TRANSCRIPTASE HOMOLOG (RETROVIRAL ELEMENT) ;
11818	13340	25830	6.1	1.0E-124	AA397551.1	EST_HUMAN	z81b04.r1 Strategene schizo brain S11 Homo sapiens cDNA clone IMAGE:728719 5' similar to TR:G300482 G300482 POL=REVERSE TRANSCRIPTASE HOMOLOG (RETROVIRAL ELEMENT) ;
12284	24474	30934	1.28	1.0E-124	AB028016.1	NT	Homo sapiens mRNA for KIAA1093 protein, partial cds
12542	24960	30832	2.42	1.0E-124	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
12542	24960	30833	2.42	1.0E-124	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
341	12893		8.05	1.0E-125	AB032998.1	NT	Homo sapiens mRNA for KIAA1172 protein, partial cds
451	12880	25136	3.95	1.0E-125	BE743922.1	EST_HUMAN	601577981F1 NIH_MGC 9 Homo sapiens cDNA clone IMAGE:3926685 5'
672	13286	25777	23.21	1.0E-125	AI110658.1	EST_HUMAN	HA0086 Human fetal liver cDNA library Homo sapiens cDNA
672	13286	25778	23.21	1.0E-125	AI110658.1	EST_HUMAN	HA0086 Human fetal liver cDNA library Homo sapiens cDNA
757	13376	25871	1.7	1.0E-125	AF284750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
893	13507	26025	2.68	1.0E-125	AA042813.1	EST_HUMAN	z453c07.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:486540 3' similar to gb:X65857_cds1 OLFACTORY RECEPTOR-LIKE PROTEIN HGMP07E (HUMAN);
1036	13646	26158	2.18	1.0E-125	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
1193	13794	26303	1.9	1.0E-125	7662279	NT	Homo sapiens KIAA0744 gene product; histone deacetylase 7 (KIAA0744), mRNA
1712	15448	26842	1.65	1.0E-125	7661867	NT	Homo sapiens KIAA0022 gene product (KIAA0022), mRNA
1836	14424	26975	0.96	1.0E-125	U78027.1	NT	Homo sapiens Bruton's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3) genes, complete cds
1847	14435	26981	2.28	1.0E-125	AF015450.1	NT	Homo sapiens Usurpin-alpha mRNA, complete cds
1847	14435	26992	2.28	1.0E-125	AF015450.1	NT	Homo sapiens Usurpin-alpha mRNA, complete cds
2397	14965	27536	1.03	1.0E-125	AA011278.1	EST_HUMAN	201g09.r1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:429568 5'
2632	15193	27764	1.06	1.0E-125	4504696	NT	Homo sapiens inhibin, alpha (INH) mRNA
2632	15193	27765	1.06	1.0E-125	4504696	NT	Homo sapiens inhibin, alpha (INH) mRNA
3925	16523	28891	1.59	1.0E-125	AA042813.1	EST_HUMAN	z453c07.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:486540 3' similar to gb:X65857_cds1 OLFACTORY RECEPTOR-LIKE PROTEIN HGMP07E (HUMAN);
4648	17230	29686	2.78	1.0E-125	11425114	NT	Homo sapiens zinc finger protein ZNF287 (ZNF287), mRNA
4648	17230	29687	2.78	1.0E-125	11425114	NT	Homo sapiens zinc finger protein ZNF287 (ZNF287), mRNA
4724	17305	29749	1.54	1.0E-125	BE315412.1	EST_HUMAN	601141152F1 NIH_MGC 9 Homo sapiens cDNA clone IMAGE:3140798 5'
5932	18554	31281	0.69	1.0E-125	BF683945.1	EST_HUMAN	602139874F1 NIH_MGC_46 Homo sapiens cDNA clone IMAGE:4300770 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6033	18652	31394	1.55	1.0E-125	11438448	NT	Homo sapiens KIAA0985 protein (KIAA0985), mRNA
6052	18670	31409	1.18	1.0E-125	BE175169.1	EST_HUMAN	QV2-HT0577-010500-165-b06 HT0577 Homo sapiens cDNA
6089	18705	31453	3.2	1.0E-125	BE802660.1	EST_HUMAN	601433472F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3918952 5'
6129	18744	31497	0.75	1.0E-125	AI679804.1	EST_HUMAN	tu67c07.x1 NCI_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2256108 3' similar to WP:C45G9.2
6695	19291	32094	1.55	1.0E-125	BE562526.1	EST_HUMAN	CE01854;
6695	19291	32095	1.55	1.0E-125	BE562526.1	EST_HUMAN	601335826F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3889790 5'
7121	19461	32277	65.83	1.0E-125	X03427.1	NT	601335826F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3889790 5'
7121	19461	32278	65.83	1.0E-125	X03427.1	NT	Homo sapiens IGF-II gene, exon 5
7538	20058	32632	0.75	1.0E-125	BE278823.1	EST_HUMAN	Homo sapiens IGF-II gene, exon 5
8483	21022	33938	1	1.0E-125	U90288.1	NT	601159076F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3505603 5'
8483	21022	33939	1	1.0E-125	U90288.1	NT	Human chromosome 10 duplicated adrenoleukodystrophy (ALD) gene segment containing exons 8-10
9046	21583	34512	9.65	1.0E-125	BE181640.1	EST_HUMAN	Human chromosome 10 duplicated adrenoleukodystrophy (ALD) gene segment containing exons 8-10
9046	21583	34513	9.65	1.0E-125	BE181640.1	EST_HUMAN	QV1-HT0638-070500-191-d12 HT0638 Homo sapiens cDNA
9303	21903	34852	1.05	1.0E-125	AI565996.1	EST_HUMAN	QV1-HT0638-070500-191-d12 HT0638 Homo sapiens cDNA
10350	22844	35839	0.53	1.0E-125	BE794576.1	EST_HUMAN	tr52c03.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2171981 3' similar to TR:Q14089 Q14089
10388	22882	35876	0.73	1.0E-125	AB002298.1	NT	HYPOTHETICAL PROTEIN
10582	23098	38112	3.78	1.0E-125	AF043458.1	NT	601590345F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3944531 5'
11016	23530	36566	4.05	1.0E-125	AB014567.1	NT	Human mRNA for KIAA0300 gene, partial cds
11169	23676	36722	1.56	1.0E-125	7669505	NT	Homo sapiens I-REL gene, exon 5
11174	23681	36727	6.41	1.0E-125	AF026029.1	NT	Homo sapiens mRNA for KIAA0667 protein, partial cds
11279	23732	36787	2.99	1.0E-125	AW812899.1	EST_HUMAN	Homo sapiens myosin, heavy polypeptide 1, skeletal muscle, adult (MYH1), mRNA
11375	23827	36888	6.08	1.0E-125	BE074267.1	EST_HUMAN	Homo sapiens poly(A) binding protein II (PABP2) gene, complete cds
11375	23827	36889	6.08	1.0E-125	BE074267.1	EST_HUMAN	RC3-ST0186-260200-018-c11 ST0186 Homo sapiens cDNA
806	13423	25929	3.44	1.0E-126	4758007	NT	QV3-BT0569-020200-075-g09 BT0569 Homo sapiens cDNA
809	13426	25932	1.92	1.0E-126	M61936.1	NT	QV3-BT0569-020200-075-g09 BT0569 Homo sapiens cDNA
952	13564	26076	2.95	1.0E-126	X68735.1	NT	Homo sapiens CDC-like kinase (CLK) mRNA
3108	15723	28194	9.08	1.0E-126	AA160709.1	EST_HUMAN	Homo sapiens CDC-like kinase (CLK) mRNA
3108	15723	28195	9.08	1.0E-126	AA160709.1	EST_HUMAN	Human laminin B1 chain gene, exon 20
3691	16292	28761	0.98	1.0E-126	X53941.1	NT	H. sapiens gene for alpha1-antichymotrypsin, exon 3
3716	16317	28785	2.02	1.0E-126	7657038	NT	zo72c03.r1 Stralagene pancreas (#837208) Homo sapiens cDNA clone IMAGE:592420 5'
							zo72c03.r1 Stralagene pancreas (#837208) Homo sapiens cDNA clone IMAGE:592420 5'
							H. sapiens DNA for liver cytochrome b5 pseudogene
							Homo sapiens death receptor 6 (DR6), mRNA

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4902	17477	29933	1.03	1.0E-126	AF101108.1	NT	Homo sapiens collagen type XI alpha-1 (COL11A1) gene, exon 83
4902	17477	29934	1.03	1.0E-126	AF101108.1	NT	Homo sapiens collagen type XI alpha-1 (COL11A1) gene, exon 83
4981	17538	29978	1.31	1.0E-126	N34078.1	EST_HUMAN	W78C06.1 Soares melanocyte 2N6HM Homo sapiens cDNA clone IMAGE:267850 5'
6380	18984	31784	3.46	1.0E-126	AA460075.1	EST_HUMAN	z68603.r1 Soares, total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:788444 5' similar to TR.G1145880 G1145880 TTIN ;
6432	19035	31820	4.2	1.0E-126	AB040958.1	NT	Homo sapiens mRNA for KIAA1525 protein, partial cds
6432	19035	31821	4.2	1.0E-126	AB040958.1	NT	Homo sapiens mRNA for KIAA1525 protein, partial cds
7511	20032	32897	0.85	1.0E-126	AF257737.1	NT	Homo sapiens ciliary dynein heavy chain 9 (DNAH9) mRNA, complete cds
7511	20032	32898	0.85	1.0E-126	AF257737.1	NT	Homo sapiens ciliary dynein heavy chain 9 (DNAH9) mRNA, complete cds
7819	20361	33267	0.92	1.0E-126	AB037715.1	NT	Homo sapiens mRNA for KIAA1294 protein, partial cds
7819	20361	33268	0.92	1.0E-126	AB037715.1	NT	Homo sapiens mRNA for KIAA1294 protein, partial cds
7929	20471	33380	5.78	1.0E-126	X16609.1	NT	Human mRNA for ankryrin (variant 2.1)
8124	20665	33575	0.85	1.0E-126	AA483368.1	EST_HUMAN	ne74b12.s1 NCI_CGAP_Ew1 Homo sapiens cDNA clone IMAGE:809883 similar to SW:TSG8_HUMAN P88066 TUMOR NECROSIS FACTOR-INDUCIBLE PROTEIN TSG-8 PRECURSOR ;
9711	22209	35181	0.52	1.0E-126	4505424	NT	Homo sapiens neuro-oncological ventral antigen 1 (NOVA1), splice variant 1, mRNA
10672	23204	36217	1.73	1.0E-126	M93196.1	NT	Human macrophage mannose receptor (MRC1) gene, exon 5
10738	23263	36278	3.69	1.0E-126	BF983175.1	EST_HUMAN	G02139138F1 NIH_MGC_46 Homo sapiens cDNA clone IMAGE:4288240 5'
11392	23844	36908	2.32	1.0E-126	BE261680.1	EST_HUMAN	G01149404F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3502129 5'
11638	16292	28761	2.52	1.0E-126	X53941.1	NT	H. sapiens DNA for liver cytochrome b5 pseudogene
12304	18036	30496	6.76	1.0E-126	BE743922.1	EST_HUMAN	G01577881F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3926885 5'
183	12845	25330	4.5	1.0E-127	AB024597.1	NT	Homo sapiens mRNA for casein kinase I epsilon, complete cds
183	12845	25331	4.5	1.0E-127	AB024597.1	NT	Homo sapiens mRNA for casein kinase I epsilon, complete cds
184	12845	25330	2.76	1.0E-127	AB024597.1	NT	Homo sapiens mRNA for casein kinase I epsilon, complete cds
184	12845	25331	2.76	1.0E-127	AB024597.1	NT	Homo sapiens mRNA for casein kinase I epsilon, complete cds
295	12951	25439	1.3	1.0E-127	D87875.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
295	12951	25440	1.3	1.0E-127	D87875.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
914	13527	26046	2.22	1.0E-127	AF114488.1	NT	Homo sapiens intersecin short isoform (ITSN) mRNA, complete cds
949	13561	26075	1.37	1.0E-127	U72621.2	NT	Homo sapiens bcl on transformation LOT1 mRNA, complete cds
1729	14320	26862	1.33	1.0E-127	4827053	NT	Homo sapiens ubiquitin specific protease 8 (USP8) mRNA
2111	14689	27256	2.81	1.0E-127	5803065	NT	Homo sapiens leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 1 (LILRA1), mRNA
2111	14689	27257	2.81	1.0E-127	5803065	NT	Homo sapiens leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 1 (LILRA1), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2241	14816	27389	5.62	1.0E-127	4506820	NT	Homo sapiens ribosomal protein L28 (RPL26) mRNA
2381	14950	27523	3.29	1.0E-127	AF245505.1	NT	Homo sapiens adiclin mRNA, complete cds
2640	15199	27773	5.29	1.0E-127	X12881.1	NT	Human mRNA for cyokeratin 18
3753	16354	28822	1.02	1.0E-127	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
							au80e06.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782594 5' similar to TR:Q15170 Q15170 TRANSCRIPTION FACTOR S-II-RELATED PROTEIN ;contains element MER22 repetitive element ;
3884	16482	28944	0.75	1.0E-127	AW161297.1	EST_HUMAN	Homo sapiens delayed rectifier potassium channel subunit Isk mRNA, complete cds
4194	16783	29232	0.66	1.0E-127	AF135188.1	NT	Homo sapiens chromosome 21 segment HS21C047
4303	16889	29332	0.61	1.0E-127	AL163247.2	NT	Homo sapiens neuroblastoma-amplified protein (LOC51594), mRNA
4340	16927	29367	21.24	1.0E-127	7706239	NT	Homo sapiens neuroblastoma-amplified protein (LOC51594), mRNA
4340	16927	29368	21.24	1.0E-127	7706239	NT	Homo sapiens neuroblastoma-amplified protein (LOC51594), mRNA
4395	17178	29625	0.68	1.0E-127	AF252297.1	NT	Homo sapiens cytochrome P450 retinoid metabolizing protein P450RAL-2 mRNA, complete cds
4708	17290	29734	5.02	1.0E-127	4506384	NT	Homo sapiens RAD1 (S. pombe) homolog (RAD1) mRNA, and translated products
4738	17319		2.84	1.0E-127	AL163288.2	NT	Homo sapiens chromosome 21 segment HS21C068
4780	17361	29811	1.04	1.0E-127	6912639	NT	Homo sapiens Ring1 and YY1 binding protein (RYBP), mRNA
							za01a10.r1 Soares melanocyte 2Nbl-HM Homo sapiens cDNA clone IMAGE:291258 5' similar to SW:PIP6_RAT P10688 1-PHOSPHATIDYLINOSITOL-4,5-BISPHOSPHATE PHOSPHODIESTERASE DELTA 1 ;
5884	18506	31232	2.37	1.0E-127	W03547.1	EST_HUMAN	Homo sapiens neuronal cell adhesion molecule (NRCAM) mRNA
5912	18534	31260	0.86	1.0E-127	4826863	NT	H. sapiens NOS2 gene, exon 6
5970	18591	31326	4.61	1.0E-127	X85764.1	NT	H. sapiens TCF11 gene, exon 3-6
6310	18917	31691	2.21	1.0E-127	X84060.1	NT	Homo sapiens integrin, beta 8 (ITGB8) mRNA
6463	19064	31849	5.89	1.0E-127	4504778	NT	Homo sapiens immunoglobulin superfamily, member 3 (IGSF3), mRNA
6764	19357	32166	0.93	1.0E-127	11421595	NT	Homo sapiens relin (RELN) mRNA
7122	19462	32279	0.85	1.0E-127	4826977	NT	Homo sapiens Pendred syndrome (PDS), mRNA
7760	20268	33165	1.31	1.0E-127	11421914	NT	Homo sapiens Pendred syndrome (PDS), mRNA
7760	20268	33166	1.31	1.0E-127	11421914	NT	Homo sapiens Pendred syndrome (PDS), mRNA
7763	20271	33169	0.67	1.0E-127	BF671355.1	EST_HUMAN	602151232F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4292575 5'
8820	21359	34265	0.7	1.0E-127	11427235	NT	Homo sapiens Chediak-Higashi syndrome 1 (CHS1), mRNA
8820	21359	34266	0.7	1.0E-127	11427235	NT	Homo sapiens Chediak-Higashi syndrome 1 (CHS1), mRNA
							Homo sapiens secretory pathway component Sec31B-1 mRNA, alternatively spliced, complete cds
9558	22058	35019	4.96	1.0E-127	AF274863.1	NT	Homo sapiens secretory pathway component Sec31B-1 mRNA, alternatively spliced, complete cds
9558	22058	35020	4.96	1.0E-127	AF274863.1	NT	Homo sapiens secretory pathway component Sec31B-1 mRNA, alternatively spliced, complete cds
9787	22285	35270	0.66	1.0E-127	A1298932.1	EST_HUMAN	qm94h09.x1 NCI_CGAP_LuS Homo sapiens cDNA clone IMAGE:1898449 3'

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10245	22740	35730	2.25	1.0E-127	11427235	NT	Homo sapiens Chediak-Higashi syndrome 1 (CHS1), mRNA
11037	23551	36585	6.54	1.0E-127	11417339	NT	Homo sapiens similar to heat shock 70kD protein 9B (mortalin-2) (H. sapiens) (LOC83184), mRNA
11037	23551	36586	6.54	1.0E-127	11417339	NT	Homo sapiens similar to heat shock 70kD protein 9B (mortalin-2) (H. sapiens) (LOC83184), mRNA
11490	23939	37009	1.9	1.0E-127	BE895415.1	EST_HUMAN	601434784F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3919917 5'
11490	23939	37010	1.9	1.0E-127	BE895415.1	EST_HUMAN	601434784F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3919917 5'
12046	12845	25330	1.43	1.0E-127	AB024597.1	NT	Homo sapiens mRNA for casein kinase I epsilon, complete cds
12046	12845	25331	1.43	1.0E-127	AB024597.1	NT	Homo sapiens mRNA for casein kinase I epsilon, complete cds
12253	24464	30962	1.7	1.0E-127	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
12620	24967		2.23	1.0E-127	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
485	13118	25605	2.44	1.0E-128	BE385617.1	EST_HUMAN	601278127F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3618822 5'
1195	13796	26305	1	1.0E-128	4759081	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (versican) (CSPG2) mRNA
1195	13798	26306	1	1.0E-128	4759081	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (versican) (CSPG2) mRNA
2115	14693	27260	4.14	1.0E-128	U02523.1	NT	Human FAU1P pseudogene, trinucleotide repeat regions
2115	14693	27261	4.14	1.0E-128	U02523.1	NT	Human FAU1P pseudogene, trinucleotide repeat regions
2250	14824	27400	18.53	1.0E-128	4506718	NT	Homo sapiens ribosomal protein S2 (RPS2) mRNA
3441	16048	28527	1.14	1.0E-128	AB033073.1	NT	Homo sapiens mRNA for KIAA1247 protein, partial cds
4771	17352	29804	5.43	1.0E-128	11426673	NT	Homo sapiens prospero-related homeobox 1 (PROX1), mRNA
5734	18360	31066	6.97	1.0E-128	X69538.1	NT	H. sapiens gene for inter-alpha-trypsin inhibitor heavy chain H1, exon 12
6550	19148	31944	2.08	1.0E-128	11420985	NT	Homo sapiens phosphodiesterase 1C, calmodulin-dependent (70kD) (PDE1C), mRNA
7010	19508	32328	8.01	1.0E-128	BF224345.1	EST_HUMAN	7q86b10 x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE: 3'
8206	20747	33659	0.75	1.0E-128	AB037816.1	NT	Homo sapiens mRNA for KIAA1395 protein, partial cds
8206	20747	33660	0.75	1.0E-128	AB037816.1	NT	Homo sapiens mRNA for KIAA1395 protein, partial cds
10043	22538	35535	1.62	1.0E-128	AA639198.1	EST_HUMAN	ns04a11.t1 NCI_CGAP_Ewt Homo sapiens cDNA clone IMAGE:1182820 similar to TR:G951338 G951338
10588	23123	36137	5.48	1.0E-128	11425254	NT	CHROMOSOME SEGREGATION GENE HOMOLOG CAS. ;
10588	23123	36137	5.48	1.0E-128	11425254	NT	Homo sapiens glutamate receptor, ionotropic, N-methyl D-aspartate 2D (GRIN2D), mRNA
10587	23131	36145	5.15	1.0E-128	AA628959.1	EST_HUMAN	cm68h08.s1 NCI_CGAP_GC4 Homo sapiens cDNA clone IMAGE:1552383 3' similar to gb:X54941 CYCLIN-
11905	24244		4.37	1.0E-128	AW955290.1	EST_HUMAN	DEPENDENT KINASES REGULATORY SUBUNIT 1 (HUMAN);
127	13071	25568	12.08	1.0E-129	S37722.1	NT	EST367360 IMAGE resequencing, MAGC Homo sapiens cDNA
438	13071	25568	14.64	1.0E-128	S37722.1	NT	insulin-like growth factor binding protein-2 [human, placenta, Genomic, 1019 nt, segment 2 of 4]
1756	14346	26891	2.48	1.0E-128	AL098880.1	NT	insulin-like growth factor binding protein-2 [human, placenta, Genomic, 1019 nt, segment 2 of 4]
1756	14346	26891	2.48	1.0E-128	AL098880.1	NT	Novel human mRNA containing Zinc finger C2H2 type domains
1761	14351	26896	1.62	1.0E-128	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1761	14351	26897	1.62	1.0E-129	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
1886	14471	27029	2.2	1.0E-129	11418522	NT	Homo sapiens zinc finger protein 76 (expressed in testis) (ZNF76), mRNA
3162	15778	28244	1.41	1.0E-129	Q14585	SWISSPROT	ZINC FINGER PROTEIN HZF10
3162	15776	28245	1.41	1.0E-129	Q14585	SWISSPROT	ZINC FINGER PROTEIN HZF10
3162	15776	28246	1.41	1.0E-129	Q14585	SWISSPROT	ZINC FINGER PROTEIN HZF10
4244	16832	29283	1.95	1.0E-129	AB040892.1	NT	Homo sapiens mRNA for KIAA1459 protein, partial cds
4367	16954	29394	2.57	1.0E-129	AW755254.1	EST_HUMAN	CMYA5 Human cardiac muscle expression library Homo sapiens cDNA clone 4151935 similar to CMYA5
4367	16954	29395	2.57	1.0E-129	AW755254.1	EST_HUMAN	Cardiomyopathy associated gene 5
6241	18850	31620	4.78	1.0E-129	AJ008345.1	NT	CMYA5 Human cardiac muscle expression library Homo sapiens cDNA clone 4151935 similar to CMYA5
7181	19713	32581	4.38	1.0E-129	AJ008345.1	NT	Cardiomyopathy associated gene 5
7241	19770	32628	14.44	1.0E-129	11420850	NT	Homo sapiens KVLQT1 gene
7535	20055	32928	0.78	1.0E-129	AF041056.1	NT	Homo sapiens similar to ribosomal protein S26 (H. sapiens) (LOC636894), mRNA
7535	20055	32929	0.78	1.0E-129	AF041056.1	NT	Homo sapiens WSCR4 gene, exons 3 and 4
8260	20801	35473	3.93	1.0E-129	AB014534.1	NT	Homo sapiens WSCR4 gene, exons 3 and 4
9991	22486	35474	1.16	1.0E-129	11437282	NT	Homo sapiens mRNA for KIAA0634 protein, partial cds
9991	22486	35474	1.16	1.0E-129	11437282	NT	Homo sapiens solute carrier family 21 (organic anion transporter), member 9 (SLC21A9), mRNA
11102	23612	36652	3.34	1.0E-129	AA625526.1	EST_HUMAN	Homo sapiens solute carrier family 21 (organic anion transporter), member 9 (SLC21A9), mRNA
11177	19770	32628	11.7	1.0E-129	11420850	NT	af2707.1 Soares, NIHMPu, S1 Homo sapiens cDNA clone IMAGE:1047589 5'
							Homo sapiens similar to ribosomal protein S26 (H. sapiens) (LOC636894), mRNA
11892	24235		2.32	1.0E-129	H83155.1	EST_HUMAN	Y49605.1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:199112 5' similar to
12297	24494		2.07	1.0E-129	AL120739.1	EST_HUMAN	SP:B48150 B48150 HP-25-HIBERNATION-RELATED PROTEIN - TAMIAS ASIATICUS=ASIAN ;
80	12757	25239	1.85	1.0E-130	7705530	NT	DKFZp762K171_r1 762 (synonym: hmd2) Homo sapiens cDNA clone IMAGE:3346366 5'
1212	13812	26328	1.23	1.0E-130	AB037835.1	NT	Homo sapiens hypothetical protein (HSPC242), mRNA
1706	14299	26836	8.52	1.0E-130	BE275192.1	EST_HUMAN	Homo sapiens mRNA for KIAA1414 protein, partial cds
1706	14299	26837	8.52	1.0E-130	BE275192.1	EST_HUMAN	601121995F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3346366 5'
2027	14609		4.6	1.0E-130	X04092.1	NT	601121995F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3346366 5'
2127	14705		1.69	1.0E-130	8394394	NT	Human gene for catalase (EC 1.11.1.6) exon 9 mapping to chromosome 11, band p13
2799	15351		7.47	1.0E-130	AJ010230.1	NT	Homo sapiens candidate taste receptor T2R16 (T2R16), mRNA
2903	15520	27989	1.17	1.0E-130	BE584219.1	EST_HUMAN	Homo sapiens RET finger protein-like 1 antisense transcript, partial
2903	15520	27990	1.17	1.0E-130	BE584219.1	EST_HUMAN	601343016F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3685466 5'
3637	16240	28716	0.96	1.0E-130	AF240898.1	NT	601343016F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3685466 5'
							Homo sapiens retinol dehydrogenase homolog isoform-1 (RDH) mRNA, complete cds



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Table 4  
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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3831	15520	27989	5.82	1.0E-130	BE564218.1	EST_HUMAN	601343016F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3885468 5'
3831	15520	27990	5.82	1.0E-130	BE564219.1	EST_HUMAN	601343016F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3885468 5'
4010	16608	29081	1.56	1.0E-130	AW503580.1	EST_HUMAN	UI-HF-BNO-aky-g-06-0-U1.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078731 5'
4147	16739	29192	1.18	1.0E-130	M97710.1	NT	Human T-cell receptor (V alpha 22.1, J alpha RPMI4265-variant, C alpha 1) mRNA
4636	17219	29672	9	1.0E-130	AW843993.1	EST_HUMAN	CM4-CN0045-180200-511-002 CN0045 Homo sapiens cDNA
5258	17821	30246	1.11	1.0E-130	AW363299.1	EST_HUMAN	RC0-CT0318-201189-031-a11 CT0318 Homo sapiens cDNA
5258	17821	30247	1.11	1.0E-130	AW363299.1	EST_HUMAN	RC0-CT0318-201189-031-a11 CT0318 Homo sapiens cDNA
6910	19589	32396	0.74	1.0E-130	AW843875.1	EST_HUMAN	CM0-CN0045-170200-225-g03 CN0045 Homo sapiens cDNA
6910	19589	32397	0.74	1.0E-130	AW843875.1	EST_HUMAN	CM0-CN0045-170200-225-g03 CN0045 Homo sapiens cDNA
6923	19582	32411	0.7	1.0E-130	11426446	NT	Homo sapiens estrogen-responsive B box protein (EBBP), mRNA
7301	19829	32687	2.1	1.0E-130	11416777	NT	Homo sapiens solute carrier family 8 (neurotransmitter transporter, L-proline), member 7 (SLC8A7), mRNA
8616	21155		0.98	1.0E-130	AF008551.1	NT	Homo sapiens aurora-related kinase 1 (ARK1) mRNA, complete cds
8763	21292	34212	4.06	1.0E-130	AW956242.1	EST_HUMAN	EST388312 MAGC sequences: MAGD Homo sapiens cDNA
9141	21676	34619	1.97	1.0E-130	AB037756.1	NT	Homo sapiens mRNA for KIAA1335 protein, partial cds
9846	22344		0.78	1.0E-130	AW103454.1	EST_HUMAN	xd36606.x1 NCL_CGAP_Ox23 Homo sapiens cDNA clone IMAGE:2595874 3'
4	12684	25140	2.27	0.0E+00	AA228126.1	EST_HUMAN	zr58c04.r1 Soeires_NhiHMPu_S1 Homo sapiens cDNA clone IMAGE:867590 5' similar to TR:G222811
4	12684	25141	2.27	0.0E+00	AA228126.1	EST_HUMAN	G222811 ALPHA 1 CHAIN OF TYPE XII COLLAGEN ;
8	12687	25145	1.56	0.0E+00	4885136	NT	G222811 ALPHA 1 CHAIN OF TYPE XII COLLAGEN ;
17	12696	25152	2.85	0.0E+00	8923349	NT	Homo sapiens checkpoint suppressor 1 (CHES1), mRNA
17	12696	25153	2.85	0.0E+00	8923349	NT	Homo sapiens hypothetical protein FLJ20371 (FLJ20371), mRNA
24	12703	25160	4.29	0.0E+00	D83327.1	NT	Homo sapiens hypothetical protein FLJ20371 (FLJ20371), mRNA
24	12703	25161	4.29	0.0E+00	D83327.1	NT	Homo sapiens DCRR1 mRNA, partial cds
28	12708	25165	30.44	0.0E+00	AF141349.1	NT	Homo sapiens DCRR1 mRNA, partial cds
37	12716	25175	38.86	0.0E+00	5802697	NT	Homo sapiens beta-tubulin mRNA, complete cds
39	12718	25178	23.21	0.0E+00	M58600.1	NT	Homo sapiens Cdc42 effector protein 2 (CEP2), mRNA
42	12721	25182	7.78	0.0E+00	M58600.1	NT	Human heparin cofactor II (HCF2) gene, exons 1 through 5
44	12723	25184	4.41	0.0E+00	6857825	NT	Human heparin cofactor II (HCF2) gene, exons 1 through 5
61	12740	25211	8.23	0.0E+00	Y17151.2	NT	Homo sapiens RNA-binding protein S1, serine-rich domain (RNPS1), mRNA
61	12740	25212	8.23	0.0E+00	Y17151.2	NT	Homo sapiens mRNA for multidrug resistance protein 3 (ABCC3)
63	12742	25216	1	0.0E+00	D78804.1	EST_HUMAN	Homo sapiens mRNA for multidrug resistance protein 3 (ABCC3)
63	12742	25217	1	0.0E+00	D78804.1	EST_HUMAN	HUM516H08B Human placenta polyA+ (TFujiiwara) Homo sapiens cDNA clone GEN:516H08 5'

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
64	12743	25218	28.22	0.0E+00	L16558.1	NT	Human ribosomal protein L7 (RPL7) mRNA, complete cds
66	12745	25221	11.83	0.0E+00	AW009534.1	EST_HUMAN	cr48e07.x1 Jla bone marrow stroma Homo sapiens cDNA clone HBMSC_cr48e07 3'
66	12745	25222	11.83	0.0E+00	AW009534.1	EST_HUMAN	cr48e07.x1 Jla bone marrow stroma Homo sapiens cDNA clone HBMSC_cr48e07 3'
70	12748	25226	0.8	0.0E+00	M60676.1	NT	Human von Willebrand factor pseudogene corresponding to exons 23 through 34
71	12749		0.85	0.0E+00	M60676.1	NT	Human von Willebrand factor pseudogene corresponding to exons 23 through 34
79	12756	25237	3.66	0.0E+00	4758977	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
79	12756	25238	3.66	0.0E+00	4758977	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
82	12756	25237	1.9	0.0E+00	4758977	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
82	12756	25238	1.9	0.0E+00	4758977	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type substrate 1 (PTPNS1) mRNA
85	12761	25244	0.85	0.0E+00	4501850	NT	Homo sapiens amiloride binding protein 1 (amine oxidase (copper-containing))(ABP1), nuclear gene encoding mitochondrial protein, mRNA
86	12762	25244	0.85	0.0E+00	4501850	NT	Homo sapiens heterogeneous nuclear ribonucleoprotein A1 (HNRPA1) mRNA
95	12771	25253	38.11	0.0E+00	4504444	NT	Homo sapiens actin, beta (ACTB) mRNA
98	12774	25256	28.23	0.0E+00	U89277.1	NT	Human polyhomeotic 1 homolog (HPH1) mRNA, partial cds
105	12781	25263	2.29	0.0E+00	A114743.1	EST_HUMAN	HA1347 Human fetal liver cDNA library Homo sapiens cDNA
106	12782	25264	2.19	0.0E+00	AB037784.1	NT	Homo sapiens mRNA for KIAA1363 protein, partial cds
112	12785	25268	0.64	0.0E+00	X91213.1	NT	H. sapiens ncx1 gene (exon 2)
121	12792	25274	1.98	0.0E+00	A1623701.1	EST_HUMAN	ts38b05.x1 NC1 CGAP U14 Homo sapiens cDNA clone IMAGE:2230833 3' similar to TR:Q99551 Q99551 MITOCHONDRIAL TRANSCRIPTION TERMINATION FACTOR PRECURSOR. ;
122	12792	25274	2.44	0.0E+00	A1623701.1	EST_HUMAN	ts38b05.x1 NC1 CGAP U14 Homo sapiens cDNA clone IMAGE:2230833 3' similar to TR:Q99551 Q99551 MITOCHONDRIAL TRANSCRIPTION TERMINATION FACTOR PRECURSOR. ;
123	15383	25275	2.64	0.0E+00	N36040.1	EST_HUMAN	yy01h09.r1 Soares melanocyte 2N6HM Homo sapiens cDNA clone IMAGE:270017 5'
123	15383	25276	2.64	0.0E+00	N36040.1	EST_HUMAN	yy01h09.r1 Soares melanocyte 2N6HM Homo sapiens cDNA clone IMAGE:270017 5'
128	12795	25281	1.12	0.0E+00	4505458	NT	Homo sapiens neuropilin 2 (NRP2) mRNA
136	12801	25289	3.85	0.0E+00	4505938	NT	Homo sapiens polymerase (RNA) II (DNA directed) polypeptide A (220kD) (POLR2A) mRNA
136	12801	25290	3.85	0.0E+00	4505938	NT	Homo sapiens polymerase (RNA) II (DNA directed) polypeptide A (220kD) (POLR2A) mRNA
144	13059	25552	0.8	0.0E+00	4503680	NT	Homo sapiens IgG Fc binding protein (FC(GAMMA)BP) mRNA
146	12809	25297	0.85	0.0E+00	T56945.1	EST_HUMAN	ye83g04.12 Stratagene fetal spleen (#937205) Homo sapiens cDNA clone IMAGE:68310 5'
146	12809	25298	0.85	0.0E+00	T56945.1	EST_HUMAN	ye83g04.12 Stratagene fetal spleen (#937205) Homo sapiens cDNA clone IMAGE:68310 5'
164	12827		35.47	0.0E+00	4504444	NT	Homo sapiens heterogeneous nuclear ribonucleoprotein A1 (HNRPA1) mRNA
168	12831	25317	2.64	0.0E+00	BF036881.1	EST_HUMAN	601460375F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3863803 5'
170	12833		92.51	0.0E+00	4504444	NT	Homo sapiens heterogeneous nuclear ribonucleoprotein A1 (HNRPA1) mRNA
173	12836	25320	0.75	0.0E+00	AF111168.2	NT	Homo sapiens serine palmitoyl transferase, subunit II gene, complete cds; and unknown genes
175	12838	25321	1.22	0.0E+00	BE295673.1	EST_HUMAN	601174270F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3529864 5'

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
176	12838	25321	0.84	0.0E+00	BE295973.1	EST_HUMAN	601174270F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3529884 5'
177	12839	25322	2.37	0.0E+00	W73973.1	EST_HUMAN	z62b05.r1 Soares_fetal_heart_NbH19W Homo sapiens cDNA clone IMAGE:345201 5' similar to gb:X16282_cds1 ZINC FINGER PROTEIN CLONE 847 (HUMAN);
178	12840	25323	0.77	0.0E+00	BE162832.1	EST_HUMAN	QV3-HT0457-140200-088-004 HT0457 Homo sapiens cDNA
178	12840	25324	0.77	0.0E+00	BE162832.1	EST_HUMAN	QV3-HT0457-140200-088-004 HT0457 Homo sapiens cDNA
179	12841	25325	1.97	0.0E+00	AF244088.1	NT	Homo sapiens zinc finger protein mRNA, complete cds
182	12844	25328	24.45	0.0E+00	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
182	12844	25329	24.45	0.0E+00	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
183	12853	25338	4.25	0.0E+00	BE018970.1	EST_HUMAN	bb24e12.y1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:2863854 5' similar to WP:Y57A10A.Z
183	12853	25337	4.25	0.0E+00	BE018970.1	EST_HUMAN	bb24e12.y1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:2863854 5' similar to WP:Y57A10A.Z
188	12858	25340	2.9	0.0E+00	AB018327.1	NT	Homo sapiens mRNA for KIAA0784 protein, partial cds
188	12858	25341	2.9	0.0E+00	AB018327.1	NT	Homo sapiens mRNA for KIAA0784 protein, partial cds
189	12859	25342	1.68	0.0E+00	AB018327.1	NT	Homo sapiens mRNA for KIAA0784 protein, partial cds
189	12859	25343	1.68	0.0E+00	AB018327.1	NT	Homo sapiens mRNA for KIAA0784 protein, partial cds
189	12859	25355	92.14	0.0E+00	D50659.1	NT	Human gamma-cytoplasmic actin (ACTGP6) pseudogene
208	12869	25360	4.7	0.0E+00	AF273045.1	NT	Homo sapiens CTCL tumor antigen sa14-3 mRNA, complete cds
213	12874	25361	4.7	0.0E+00	AF273045.1	NT	Homo sapiens CTCL tumor antigen sa14-3 mRNA, complete cds
215	12876	25363	8.92	0.0E+00	AF167174.1	NT	Homo sapiens chromosome X MSL3-2 protein mRNA, complete cds
215	12876	25364	8.92	0.0E+00	AF167174.1	NT	Homo sapiens chromosome X MSL3-2 protein mRNA, complete cds
225	15410	25371	33.35	0.0E+00	AI587308.1	EST_HUMAN	tg04f08.x1 NCI_CGAP_U13 Homo sapiens cDNA clone IMAGE:2207847 3' similar to gb:J03181 PROFILIN1 (HUMAN);
225	15410	25372	33.35	0.0E+00	AI587308.1	EST_HUMAN	tg04f08.x1 NCI_CGAP_U13 Homo sapiens cDNA clone IMAGE:2207847 3' similar to gb:J03181 PROFILIN1 (HUMAN);
227	12887	25374	1.91	0.0E+00	AF195658.1	NT	Homo sapiens DNA mismatch repair protein (MLH3) gene, complete cds
231	12891		44.25	0.0E+00	4508632	NT	Homo sapiens ribosomal protein L31 (RPL31) mRNA
232	12892		8.88	0.0E+00	AF132000.1	NT	Homo sapiens TADA1 protein mRNA, complete cds
239	12899	25382	2.64	0.0E+00	AB018284.1	NT	Homo sapiens mRNA for KIAA0721 protein, partial cds
240	12899	25382	1.89	0.0E+00	AB018284.1	NT	Homo sapiens mRNA for KIAA0721 protein, partial cds
241	12900	25383	3.13	0.0E+00	6678444	NT	Mus musculus testis-specific protein, Y-encoded-like (Tspyl), mRNA
248	12908	25387	0.78	0.0E+00	BE246780.1	EST_HUMAN	TCBAP1E4466 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP4468

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
248	12908	25388	0.78	0.0E+00	BE246780.1	EST_HUMAN	TCBAP1E4466 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP4466
248	12908	25389	0.78	0.0E+00	BE246780.1	EST_HUMAN	TCBAP1E4466 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP4466
256	12916	25400	0.97	0.0E+00	AB018301.1	NT	Homo sapiens mRNA for KIAA0758 protein, partial cds
256	12916	25401	0.97	0.0E+00	AB018301.1	NT	Homo sapiens mRNA for KIAA0758 protein, partial cds
259	12918	25405	9.57	0.0E+00	5453805	NT	Homo sapiens NS1-associated protein 1 (NSAP1) mRNA
261	12920	25411	11.16	0.0E+00	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
268	12925	25411	4.93	0.0E+00	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
270	12927	25414	1.82	0.0E+00	X89772.1	NT	H. sapiens mRNA for interferon alpha/beta receptor (long form)
278	12935	25433	7.37	0.0E+00	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
291	12947	25434	1.28	0.0E+00	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
293	12949	25436	1.96	0.0E+00	7706028	NT	Homo sapiens hypothetical protein (LOC51250), mRNA
304	12959		2.01	0.0E+00	D83327.1	NT	Homo sapiens DCRR1 mRNA, partial cds
305	12960	25449	2.17	0.0E+00	D83327.1	NT	Homo sapiens DCRR1 mRNA, partial cds
305	12960	25450	2.17	0.0E+00	D83327.1	NT	Homo sapiens DCRR1 mRNA, partial cds
306	12961		1.14	0.0E+00	AW845293.1	EST_HUMAN	IL2-CT0031-181199-020-B03 CT0031 Homo sapiens cDNA
315	12969	25457	6.39	0.0E+00	4557029	NT	Homo sapiens potassium inwardly-rectifying channel, subfamily J, member 15 (KCNU15) mRNA
315	12969	25458	6.39	0.0E+00	4557029	NT	Homo sapiens potassium inwardly-rectifying channel, subfamily J, member 15 (KCNU15) mRNA
326	12980	25468	8.1	0.0E+00	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
327	12981	25469	4.44	0.0E+00	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
328	15413		23.15	0.0E+00	4506728	NT	Homo sapiens ribosomal protein S5 (RPS5) mRNA
329	12982	25470	0.99	0.0E+00	4503914	NT	Homo sapiens phosphoribosylglycinamide formyltransferase, phosphoribosylglycinamide synthetase, phosphoribosylaminimidazole synthetase (GART) mRNA
330	12983		2.5	0.0E+00	AA480002.1	EST_HUMAN	zvl8c06.11 Soares_NhhMPu_S1 Homo sapiens cDNA clone IMAGE:753994 5'
331	12984	25471	18.8	0.0E+00	4507152	NT	Homo sapiens SON DNA binding protein (SON) mRNA
332	12984	25471	19.33	0.0E+00	4507152	NT	Homo sapiens SON DNA binding protein (SON) mRNA
336	12988	25475	3.18	0.0E+00	AF114488.1	NT	Homo sapiens interseitin short isoform (ITSN) mRNA, complete cds
349	13000	25484	1.84	0.0E+00	O14867	SWISSPROT	TRANSCRIPTION REGULATOR PROTEIN BACH1 (BTB AND CNC HOMOLOG 1) (HA2303)
349	13000	25485	1.84	0.0E+00	O14867	SWISSPROT	TRANSCRIPTION REGULATOR PROTEIN BACH1 (BTB AND CNC HOMOLOG 1) (HA2303)
350	13001	25486	3.83	0.0E+00	7657213	NT	Homo sapiens hormonally upregulated neu tumor-associated kinase (HUNK), mRNA
351	13001	25486	1.41	0.0E+00	7657213	NT	Homo sapiens hormonally upregulated neu tumor-associated kinase (HUNK), mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
366	13015	25498	5.41	0.0E+00	5174574	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (trithorax (Drosophila) homolog): translocated to, 4 (MLLT4) mRNA
367	13016	25499	1.14	0.0E+00	4502568	NT	Homo sapiens moesin (MSN), mRNA
370	13019	25503	20.33	0.0E+00	4827057	NT	Homo sapiens X-box binding protein 1 (XBP1) mRNA
373	13022	25508	1.48	0.0E+00	U71600.1	NT	Human zinc finger protein zfp31 (zfp31) mRNA, partial cds
378	13026	25512	2.59	0.0E+00	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
378	13026	25513	2.59	0.0E+00	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
379	15414	25514	2.86	0.0E+00	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
381	13028	25516	0.74	0.0E+00	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
384	13031	25520	1.3	0.0E+00	4503854	NT	Homo sapiens GA-binding protein transcription factor, alpha subunit (80kD) (GABPA), mRNA
385	13032	25521	1.87	0.0E+00	D80006.1	NT	Human mRNA for KIAA0184 gene, partial cds
386	13032	25521	1.52	0.0E+00	D80006.1	NT	Human mRNA for KIAA0184 gene, partial cds
388	13034	25523	0.83	0.0E+00	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
398	13043	25534	3.85	0.0E+00	AU134963.1	EST_HUMAN	AU134963 PLACE1 Homo sapiens cDNA clone PLACE1000899 5'
410	13085	25578	8.92	0.0E+00	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
411	13086	25579	2.03	0.0E+00	AI363014.1	EST_HUMAN	qy61h05.x1 NCL_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2018457 3' similar to gb:X54199
416	13051	25541	2.36	0.0E+00	AW754180.1	EST_HUMAN	PHOSPHORIBOSYLAMINE--GLYCINE LIGASE (HUMAN);
419	13053	25544	1.95	0.0E+00	4503680	NT	RC2-CT0320-300100-016-a09 CT0320 Homo sapiens cDNA
420	13054	25545	2.21	0.0E+00	4503680	NT	Homo sapiens IgG Fc binding protein (FC(GAMMA)BP) mRNA
420	13054	25546	2.21	0.0E+00	4503680	NT	Homo sapiens IgG Fc binding protein (FC(GAMMA)BP) mRNA
421	13055	25547	1.1	0.0E+00	4503680	NT	Homo sapiens IgG Fc binding protein (FC(GAMMA)BP) mRNA
422	13056	25548	1.46	0.0E+00	4503680	NT	Homo sapiens IgG Fc binding protein (FC(GAMMA)BP) mRNA
422	13056	25549	1.46	0.0E+00	4503680	NT	Homo sapiens IgG Fc binding protein (FC(GAMMA)BP) mRNA
423	13057	25550	0.95	0.0E+00	4503680	NT	Homo sapiens IgG Fc binding protein (FC(GAMMA)BP) mRNA
424	13058	25551	2.9	0.0E+00	4503680	NT	Homo sapiens IgG Fc binding protein (FC(GAMMA)BP) mRNA
425	13059	25552	1.17	0.0E+00	4503680	NT	Homo sapiens IgG Fc binding protein (FC(GAMMA)BP) mRNA
426	13060	25553	1.66	0.0E+00	X74870.1	NT	H. sapiens gene for RNA pol II largest subunit, exons 23-29
426	13060	25554	1.66	0.0E+00	X74870.1	NT	H. sapiens gene for RNA pol II largest subunit, exons 23-29
427	13060	25553	2.78	0.0E+00	X74870.1	NT	H. sapiens gene for RNA pol II largest subunit, exons 23-29
427	13060	25554	2.78	0.0E+00	X74870.1	NT	H. sapiens gene for RNA pol II largest subunit, exons 23-29
431	13064		96.04	0.0E+00	4506608	NT	Homo sapiens ribosomal protein L19 (RPL19) mRNA
445	12674	25130	1.11	0.0E+00	R17785.1	EST_HUMAN	yg08a02.r1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:31652 5'

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
453	13087	25580	1.82	0.0E+00	4503914	NT	Homo sapiens phosphoribosylglycinamide formyltransferase, phosphoribosylglycinamide synthetase, phosphoribosylaminimidazole synthetase (GART) mRNA
454	13088		20.68	0.0E+00	4506728	NT	Homo sapiens ribosomal protein S5 (RPS5) mRNA
455	13089	25581	5.49	0.0E+00	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
456	13090	25582	10.07	0.0E+00	4507152	NT	Homo sapiens SON DNA binding protein (SON) mRNA
456	13090	25583	10.07	0.0E+00	4507152	NT	Homo sapiens SON DNA binding protein (SON) mRNA
457	13091	25584	5.34	0.0E+00	AF193607.1	NT	Mus musculus truncated SON protein (Son) mRNA, complete cds
469	13102		0.81	0.0E+00	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
471	13104	25597	2.98	0.0E+00	4557879	NT	Homo sapiens interferon gamma receptor 1 (IFNGR1) mRNA
476	13109		0.92	0.0E+00	AA324262.1	EST_HUMAN	EST27054 Cerebellum II Homo sapiens cDNA 5' end
477	13110		1.1	0.0E+00	BE254447.1	EST_HUMAN	601111520F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3352348 5'
493	13126	25611	4.29	0.0E+00	4504532	NT	Homo sapiens 5-hydroxytryptamine (serotonin) receptor 1B (HTR1B) mRNA
493	13126	25612	4.29	0.0E+00	4504532	NT	Homo sapiens 5-hydroxytryptamine (serotonin) receptor 1B (HTR1B) mRNA
499	13131	25620	11.34	0.0E+00	4557887	NT	Homo sapiens keratin 18 (KRT18) mRNA
499	13131	25621	11.34	0.0E+00	4557887	NT	Homo sapiens keratin 18 (KRT18) mRNA
509	13142	25627	2.62	0.0E+00	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
510	13143	25628	5.1	0.0E+00	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
510	13143	25629	5.1	0.0E+00	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
519	13151	25634	6.04	0.0E+00	AB033035.1	NT	Homo sapiens mRNA for KIAA1209 protein, partial cds
521	13153	25636	2.12	0.0E+00	AU132898.1	EST_HUMAN	AU132898 NT2RP4 Homo sapiens cDNA clone NT2RP4000837 5'
529	13161	25642	6.27	0.0E+00	BE385144.1	EST_HUMAN	601274951F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3615756 5'
530	15417	25643	1.89	0.0E+00	AW988825.1	EST_HUMAN	PM0-DT0065-130400-002-c06 DT0065 Homo sapiens cDNA
533	13164	25645	1.33	0.0E+00	AL117233.1	NT	Novel human gene mapping to chromosome 1
534	13165	25646	1.42	0.0E+00	8923955	NT	Homo sapiens PC326 protein (PC326), mRNA
538	13169		0.72	0.0E+00	BF373403.1	EST_HUMAN	IL2-FT0159-070800-120-F07 FT0159 Homo sapiens cDNA
545	13176	25656	4.88	0.0E+00	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
552	15418	25660	1.31	0.0E+00	BE081527.1	EST_HUMAN	QV2-BT0635-160400-142-H05 BT0635 Homo sapiens cDNA
556	13187	25665	1.27	0.0E+00	BF028005.1	EST_HUMAN	601764858F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3996998 5'
562	13193	25672	1.12	0.0E+00	AB040909.1	NT	Homo sapiens mRNA for KIAA1476 protein, partial cds
565	13196	25675	14.24	0.0E+00	6006030	NT	Homo sapiens transcription elongation factor B (SII), polypeptide 1-like (TCEB1L) mRNA
566	13197	25676	4.05	0.0E+00	4504036	NT	Homo sapiens guanine nucleotide binding protein (G protein), alpha 11 (Gq class) (GNA11) mRNA
568	13197	25677	4.05	0.0E+00	4504036	NT	Homo sapiens guanine nucleotide binding protein (G protein), alpha 11 (Gq class) (GNA11) mRNA
568	13198	25679	1.36	0.0E+00	8923831	NT	Homo sapiens anillin (LOC54443), mRNA
569	13200	25680	0.96	0.0E+00	8923831	NT	Homo sapiens anillin (LOC54443), mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
569	13200	25681	0.96	0.0E+00	8923831	NT	Homo sapiens anillin (LOC54443), mRNA
574	13204		4.55	0.0E+00	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
582	13212	25690	1.45	0.0E+00	AW135324.1	EST_HUMAN	U1-H-B11-ecb-h-04-0-U1.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2713951 3'
592	13222		6.8	0.0E+00	D10083.1	NT	Homo sapiens RGH1 gene, retrovirus-like element
612	13240	25715	4.68	0.0E+00		NT	Homo sapiens ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1 (UQCRCF1), nuclear gene encoding mitochondrial protein, mRNA
625	13252		6.05	0.0E+00	J04066.1	NT	Human apolipoprotein A-I (ApoA-I) gene, exon 1
628	13255	25729	2.19	0.0E+00	BF104898.1	EST_HUMAN	601822627F1 NIH_MGC_75 Homo sapiens cDNA clone IMAGE:4045447 5'
630	13257	25731	1.6	0.0E+00	8923831	NT	Homo sapiens hypothetical protein FLJ20701 (FLJ20701), mRNA
630	13257	25732	1.6	0.0E+00	8923831	NT	Homo sapiens hypothetical protein FLJ20701 (FLJ20701), mRNA
631	13257	25731	1.74	0.0E+00	8923831	NT	Homo sapiens hypothetical protein FLJ20701 (FLJ20701), mRNA
631	13257	25732	1.74	0.0E+00	8923831	NT	Homo sapiens hypothetical protein FLJ20701 (FLJ20701), mRNA
632	13257	25731	1.81	0.0E+00	8923831	NT	Homo sapiens hypothetical protein FLJ20701 (FLJ20701), mRNA
632	13257	25732	1.81	0.0E+00	8923831	NT	Homo sapiens hypothetical protein FLJ20701 (FLJ20701), mRNA
637	13260	25735	0.88	0.0E+00	4501854	NT	Homo sapiens acetyl-Coenzyme A carboxylase beta (ACACB), mRNA
642	13265	25741	0.94	0.0E+00	AF221712.1	NT	Homo sapiens Smad- and Olf-interacting zinc finger protein mRNA, partial cds
642	13265	25742	0.94	0.0E+00	AF221712.1	NT	Homo sapiens Smad- and Olf-interacting zinc finger protein mRNA, partial cds
690	13273	25750	3.63	0.0E+00	AF149773.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
652	13275	25753	0.89	0.0E+00	AB037607.1	NT	Homo sapiens mRNA for KIAA1386 protein, partial cds
654	13277	25754	1.8	0.0E+00	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
655	13278	25755	2.31	0.0E+00	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
655	13278	25756	2.31	0.0E+00	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
656	13279	25757	0.73	0.0E+00	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
656	13279	25758	0.73	0.0E+00	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
663	13287	25768	1.2	0.0E+00	AA399488.1	EST_HUMAN	z60c07.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:726732 5'
667	13291	25772	6.55	0.0E+00	D11078.1	NT	Homo sapiens RGH2 gene, retrovirus-like element
671	13295	25775	48.91	0.0E+00	W78811.1	EST_HUMAN	zh51b04.r1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:415567 5' similar to gb:A21187 ALPHA-2-MACROGLOBULIN PRECURSOR (HUMAN);
671	13295		48.91	0.0E+00	W78811.1	EST_HUMAN	zh51b04.r1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:415567 5' similar to gb:A21187 ALPHA-2-MACROGLOBULIN PRECURSOR (HUMAN);
674	13298	25776	3.09	0.0E+00		NT	Homo sapiens novel SH2-containing protein 3 (NSP3) mRNA
681	13305	25788	2.98	0.0E+00	6006003	NT	Homo sapiens glutamate receptor, ionotropic, N-methyl D-aspartate 2B (GRIN2B) mRNA
683	13307	25791	1.7	0.0E+00	5031624	NT	Homo sapiens CCAAT-box-binding transcription factor (CBF2) mRNA

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
686	13310	25795	1.77	0.0E+00	U05235.1	NT	Human neutral amino acid transporter (ASCT1) gene, exon 8
690	13314	25798	0.9	0.0E+00	AF108389.1	NT	Homo sapiens sodium/calcium exchanger isoform NaCa3 (NCX1) mRNA, complete cds
690	13314	25799	0.9	0.0E+00	AF108389.1	NT	Homo sapiens sodium/calcium exchanger isoform NaCa3 (NCX1) mRNA, complete cds
696	13319	25804	4.78	0.0E+00	4826947	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
696	13319	25805	4.78	0.0E+00	4826947	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
702	15421		1.23	0.0E+00	X57147.1	NT	Human endogenous retrovirus PHE.1 (ERV9)
711	13332	25819	21.02	0.0E+00	4504424	NT	Homo sapiens high-mobility group (nonhistone chromosomal) protein 1 (HMG1) mRNA
716	13337	25823	5.36	0.0E+00	AB029012.1	NT	Homo sapiens mRNA for KIAA1089 protein, partial cds
726	13346	25838	7.22	0.0E+00	7657468	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
738	13358	25852	87.91	0.0E+00	AA614537.1	EST_HUMAN	np49d01.s1 NCI CGAP Br1.1 Homo sapiens cDNA clone IMAGE:1129633 3' similar to gb:X57352
742	13362	25856	4.31	0.0E+00	M60675.1	NT	INTERFERON-INDUCIBLE PROTEIN 1-8U (HUMAN);
742	13362	25857	4.31	0.0E+00	M60675.1	NT	Human von Willebrand factor gene, exons 23 through 34
752	13372	25866	1.46	0.0E+00	5032192	NT	Human von Willebrand factor gene, exons 23 through 34
758	13377	25872	4.75	0.0E+00	AF264750.1	NT	Homo sapiens TNF receptor-associated factor 1 (TRAF1) mRNA
758	13377	25873	4.75	0.0E+00	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
760	13379	25876	11.52	0.0E+00	11545800	NT	Homo sapiens ALR-like protein mRNA, partial cds
766	13385	25894	2.52	0.0E+00	BE241577.1	EST_HUMAN	Homo sapiens hypothetical protein FLJ21634 (FLJ21634), mRNA
786	13404	25908	1.47	0.0E+00	AF226990.2	NT	TCAAP1D0779 Pediatric acute myelogenous leukemia cell (FAB M1) Bay/α-HGSC project=TCAA Homo sapiens cDNA clone TCAAP0779
786	13404	25909	1.47	0.0E+00	AF226990.2	NT	Homo sapiens MHC class I antigen (HLA-G) mRNA, HLA-G1 allele, complete cds
787	13405	25910	0.72	0.0E+00	AF170492.1	NT	Homo sapiens MHC class I antigen (HLA-G) mRNA, HLA-G1 allele, complete cds
790	13408	25913	19.87	0.0E+00	J03764.1	NT	Homo sapiens chloride channel CLC4 (CLC4) mRNA, complete cds
790	13408	25914	19.87	0.0E+00	J03764.1	NT	Human, plasminogen activator inhibitor-1 gene, exons 2 to 9
793	13411	25915	1.06	0.0E+00	A3037760.1	NT	Human, plasminogen activator inhibitor-1 gene, exons 2 to 9
794	13412	25916	1.82	0.0E+00	6912749	NT	Homo sapiens mRNA for KIAA1339 protein, partial cds
796	15425	25918	2.4	0.0E+00	D30612.1	NT	Homo sapiens zinc finger protein 212 (ZNF212), mRNA
797	13414	25919	3.29	0.0E+00	BE869735.1	EST_HUMAN	Homo sapiens mRNA for repressor protein, partial cds
801	13418	25923	2.87	0.0E+00	R48915.1	EST_HUMAN	601445847F1 NIH_MGC_85 Homo sapiens cDNA clone IMAGE:3849803 5'
802	13419	25924	4.63	0.0E+00	5032086	NT	y66g08.r1 Soares breast 2N5HBst Homo sapiens cDNA clone IMAGE:154048 5'
811	13428	25933	1.72	0.0E+00	AB011399.1	NT	Homo sapiens splicing factor 3a, subunit 1, 120kD (SF3A1), mRNA
814	13432	25937	3.26	0.0E+00	7661965	NT	Homo sapiens gene for AF-6, complete cds
825	13442	25949	1.15	0.0E+00	D80006.1	NT	Homo sapiens KIAA0170 gene product (KIAA0170), mRNA
825	13442	25950	1.15	0.0E+00	D80006.1	NT	Human mRNA for KIAA0184 gene, partial cds



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
830	13447	25954	2.88	0.0E+00	X89772.1	NT	H.sapiens mRNA for interferon alpha/beta receptor (long form)
834	13451	25958	2.77	0.0E+00	AB020717.1	NT	Homo sapiens mRNA for KIAA0910 protein, partial cds
834	13451	25959	2.77	0.0E+00	AB020717.1	NT	Homo sapiens mRNA for KIAA0910 protein, partial cds
839	13455	25985	9.17	0.0E+00	5174478	NT	Homo sapiens pericentriin (PCNT) mRNA
840	13456		8.31	0.0E+00	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
857	13473	25988	1.71	0.0E+00	7657213	NT	Homo sapiens hormonally upregulated neu tumor-associated kinase (HUNK), mRNA
858	13474	25987	2.61	0.0E+00	7657213	NT	Homo sapiens hormonally upregulated neu tumor-associated kinase (HUNK), mRNA
860	13476	25989	2.3	0.0E+00	4557686	NT	Homo sapiens potassium voltage-gated channel, Isk-related family, member 1 (KCNE1) mRNA
866	13481	25995	1.58	0.0E+00	AF108830.1	NT	Homo sapiens serine-threonine protein kinase (MNBH) mRNA, complete cds
866	13481	25986	1.58	0.0E+00	AF108830.1	NT	Homo sapiens serine-threonine protein kinase (MNBH) mRNA, complete cds
867	13482	25997	0.95	0.0E+00	AF108830.1	NT	Homo sapiens serine-threonine protein kinase (MNBH) mRNA, complete cds
872	13487	26002	2.8	0.0E+00	4503854	NT	Homo sapiens GA-binding protein transcription factor, alpha subunit (GBPA), mRNA
876	13490	26007	1.96	0.0E+00	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
876	13490	26008	1.96	0.0E+00	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
883	13497		1.72	0.0E+00	AF027153.1	NT	Homo sapiens sodium/myo-inositol cotransporter (SLC5A3) gene, complete cds
887	13501	26019	6	0.0E+00	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
887	13501	26020	6	0.0E+00	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
888	13502	26021	12.68	0.0E+00	4507152	NT	Homo sapiens SON DNA binding protein (SON) mRNA
889	13503	26022	6.37	0.0E+00	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
890	13504	26023	15.55	0.0E+00	4506728	NT	Homo sapiens ribosomal protein S5 (RPS5) mRNA
894	13508	26026	1.64	0.0E+00	AB020717.1	NT	Homo sapiens mRNA for KIAA0910 protein, partial cds
894	13508	26027	1.64	0.0E+00	AB020717.1	NT	Homo sapiens mRNA for KIAA0910 protein, partial cds
895	13509	26028	2.12	0.0E+00	AA533272.1	EST_HUMAN	h166d07.s1 NCI_CGAP_P10 Homo sapiens cDNA clone IMAGE:987453
895	13509	26029	2.12	0.0E+00	AA533272.1	EST_HUMAN	h166d07.s1 NCI_CGAP_P10 Homo sapiens cDNA clone IMAGE:987453
896	13510		6.29	0.0E+00	BF677694.1	EST_HUMAN	602085578F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4249815.5
900	13514	26030	1.97	0.0E+00	7657213	NT	Homo sapiens hormonally upregulated neu tumor-associated kinase (HUNK), mRNA
900	13514	26031	1.97	0.0E+00	7657213	NT	Homo sapiens hormonally upregulated neu tumor-associated kinase (HUNK), mRNA
901	13515	26032	2.03	0.0E+00	7657213	NT	Homo sapiens hormonally upregulated neu tumor-associated kinase (HUNK), mRNA
901	13515	26033	2.03	0.0E+00	7657213	NT	Homo sapiens hormonally upregulated neu tumor-associated kinase (HUNK), mRNA
924	13537	26058	0.95	0.0E+00	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
931	13544	26061	1.84	0.0E+00	BE089592.1	EST_HUMAN	QV0-BT0703-280400-211-g11 BT0703 Homo sapiens cDNA
931	13544	26062	1.84	0.0E+00	BE089592.1	EST_HUMAN	QV0-BT0703-280400-211-g11 BT0703 Homo sapiens cDNA
941	13554	26071	2.92	0.0E+00	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
951	13563		32.19	0.0E+00	4504958	NT	Homo sapiens laminin receptor 1 (67kD, ribosomal protein SA) (LAMR1), mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
954	13568	26079	6.19	0.0E+00	U35464.1	NT	Human protein C inhibitor (PCI-B) mRNA, complete cds
954	13566	26080	6.19	0.0E+00	U35464.1	NT	Human protein C inhibitor (PCI-B) mRNA, complete cds
956	13563		27.9	0.0E+00	4504958	NT	Homo sapiens laminin receptor 1 (LR1D, ribosomal protein SA) (LAMR1), mRNA
957	13568	26082	269.29	0.0E+00	AF089747.1	NT	Homo sapiens alpha-1-antichymotrypsin precursor, mRNA, partial cds
958	13569	26083	16.83	0.0E+00	S89364.1	NT	protein C inhibitor [human, leukocytes, Genomic, 1216 nt, segment 2 of 5]
958	13569	26084	16.83	0.0E+00	S89364.1	NT	protein C inhibitor [human, leukocytes, Genomic, 1216 nt, segment 2 of 5]
958	13569	26085	16.83	0.0E+00	S89364.1	NT	protein C inhibitor [human, leukocytes, Genomic, 1216 nt, segment 2 of 5]
959	13570	26086	12.58	0.0E+00	L28101.1	NT	Homo sapiens kallistatin (PI4) gene, exons 1-4, complete cds
966	13598	26111	0.9	0.0E+00	M37190.1	NT	Human ras inhibitor mRNA, 3' end
987	13599	26112	8.4	0.0E+00	M37190.1	NT	Human ras inhibitor mRNA, 3' end
988	13600	26113	0.6	0.0E+00	M37190.1	NT	Human ras inhibitor mRNA, 3' end
989	13601	26114	1.26	0.0E+00	4507430	NT	Homo sapiens thyrotrophic embryonic factor (TEF), mRNA
989	13601	26115	1.26	0.0E+00	4507430	NT	Homo sapiens thyrotrophic embryonic factor (TEF), mRNA
997	15430	26122	6.65	0.0E+00	AI001948.1	EST_HUMAN	os98e03.s1 NCJ_CGAP_GC3 Homo sapiens cDNA clone IMAGE:1613404 3'
997	15430	26123	6.65	0.0E+00	AI001948.1	EST_HUMAN	os98e03.s1 NCJ_CGAP_GC3 Homo sapiens cDNA clone IMAGE:1613404 3'
999	13610	26125	8.95	0.0E+00	7657266	NT	Homo sapiens KIAA0929 protein Mx2 interacting nuclear target (MINT) homolog (KIAA0929), mRNA
1010	13620	26135	2.35	0.0E+00	AB030566.1	NT	Homo sapiens mRNA for PSP24, complete cds
1019	13629	26142	1.98	0.0E+00	BF366974.1	EST_HUMAN	PM2-GN0014-050900-001-f02 GN0014 Homo sapiens cDNA
1019	13629	26143	1.58	0.0E+00	BF366974.1	EST_HUMAN	PM2-GN0014-050900-001-f02 GN0014 Homo sapiens cDNA
1019	13629	26144	1.58	0.0E+00	BF366974.1	EST_HUMAN	PM2-GN0014-050900-001-f02 GN0014 Homo sapiens cDNA
1021	13631	26147	2.54	0.0E+00	X52207.1	NT	Homo sapiens partial c-fgr gene, exons 2 and 3
1021	13631	26148	2.54	0.0E+00	X52207.1	NT	Homo sapiens partial c-fgr gene, exons 2 and 3
1030	13640	26155	2.14	0.0E+00	4757969	NT	Homo sapiens chromodomain protein, Y chromosome-like (CDYL) mRNA
1042	13651	26163	1.69	0.0E+00	U83668.1	NT	Human beta-tubulin (TUB4q) gene, complete cds
1043	13652	26164	31.97	0.0E+00	U83668.1	NT	Human beta-tubulin (TUB4q) gene, complete cds
1044	13652	26164	15.2	0.0E+00	U83668.1	NT	Human beta-tubulin (TUB4q) gene, complete cds
1047	13655		5.72	0.0E+00	AF198490.1	NT	Homo sapiens 8q22.1 region and MTG8 (CBFA2T1) gene, partial cds
1048	13655		7.75	0.0E+00	AF198490.1	NT	Homo sapiens 8q22.1 region and MTG8 (CBFA2T1) gene, partial cds
1052	13659	26170	1.6	0.0E+00	AF111170.3	NT	Homo sapiens 14q32 Jagged2 gene, complete cds, and unknown gene
1053	13659	26170	2.85	0.0E+00	AF111170.3	NT	Homo sapiens 14q32 Jagged2 gene, complete cds, and unknown gene
1054	13659	26170	2.84	0.0E+00	AF111170.3	NT	Homo sapiens 14q32 Jagged2 gene, complete cds, and unknown gene
1055	13660	26171	2.67	0.0E+00	AF111170.3	NT	Homo sapiens 14q32 Jagged2 gene, complete cds, and unknown gene
1058	13663	26174	1.99	0.0E+00	7661685	NT	Homo sapiens DKFZP586M0122 protein (DKFZP586M0122), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1062	13667	26176	3.66	0.0E+00	5803114	NT	Homo sapiens inner membrane protein, mitochondrial (mitofilin) (IMMT), mRNA
1063	13668		2.66	0.0E+00	AA458680.1	EST_HUMAN	aa86g07 s1 Stragene fetal retina 937202 Homo sapiens cDNA clone IMAGE:838238 3' similar to SW:PRS8_HUMAN P47210 26S PROTEASE REGULATORY SUBUNIT 8:
1066	13671	26182	0.94	0.0E+00	N43182.1	EST_HUMAN	EST5124 WATM1 Homo sapiens cDNA clone 51124 similar to DNA-DIRECTED RNA POLYMERASE II (alignment Ser and Pro with BLASTx or p)
1066	13671	26183	0.94	0.0E+00	N43182.1	EST_HUMAN	EST5124 WATM1 Homo sapiens cDNA clone 51124 similar to DNA-DIRECTED RNA POLYMERASE II (alignment Ser and Pro with BLASTx or p)
1067	13672	26184	2.11	0.0E+00	4759249	NT	Homo sapiens TRAF family member-associated NFKB activator (TANK) mRNA
1071	13676	26185	2.11	0.0E+00	4759249	NT	Homo sapiens TRAF family member-associated NFKB activator (TANK) mRNA
1071	13676	26185	2.86	0.0E+00	8922933	NT	Homo sapiens hypothetical protein FLJ11196 (FLJ11196), mRNA
1085	13690	26200	5.51	0.0E+00	4758569	NT	Homo sapiens heat shock 70kD protein 98 (mortalin-2) (HSPA98) mRNA
1103	13707	26215	2.09	0.0E+00	4826872	NT	Homo sapiens cadherin 6, K-cadherin (fetal kidney) (CDH6) mRNA
1103	13707	26216	2.09	0.0E+00	4826872	NT	Homo sapiens cadherin 6, K-cadherin (fetal kidney) (CDH6) mRNA
1107	13711	26220	3.31	0.0E+00	8923624	NT	Homo sapiens hypothetical protein FLJ20695 (FLJ20695), mRNA
1107	13711	26221	3.31	0.0E+00	8923624	NT	Homo sapiens hypothetical protein FLJ20695 (FLJ20695), mRNA
1108	13712	26222	72.04	0.0E+00	AJ245922.1	NT	Homo sapiens mRNA for alpha-tubulin 8 (TUBA8 gene)
1110	13714		1.08	0.0E+00	8923087	NT	Homo sapiens hypothetical protein FLJ20080 (FLJ20080), mRNA
1112	13716	26226	4.16	0.0E+00	5174384	NT	Homo sapiens alkyltransfer repair; alkB homolog (ABH), mRNA
1121	13724	26237	4.89	0.0E+00	4758117	NT	Homo sapiens Death associated protein 3 (DAP3) mRNA
1135	13738	26247	2.88	0.0E+00	BE005208.1	EST_HUMAN	MRO-BND115-200300-003-H08 BND115 Homo sapiens cDNA
1158	13761	26271	4.25	0.0E+00	7708134	NT	Homo sapiens potassium channel, subfamily K, member 9 (KCNK9), mRNA
1158	13761	26272	4.25	0.0E+00	7708134	NT	Homo sapiens potassium channel, subfamily K, member 9 (KCNK9), mRNA
1171	13773	26282	1.29	0.0E+00	4826847	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
1171	13773	26283	1.29	0.0E+00	4826847	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
1172	13774	26284	23.49	0.0E+00	4508712	NT	Homo sapiens ribosomal protein S27a (RPS27A) mRNA
1174	13776	26286	1.24	0.0E+00	8923290	NT	Homo sapiens hypothetical protein FLJ20309 (FLJ20309), mRNA
1177	13779	26288	15.95	0.0E+00	AB002059.1	NT	Homo sapiens DNA for Human P2XM, complete cds
1179	13781	26290	37.33	0.0E+00	AB002059.1	NT	Homo sapiens DNA for Human P2XM, complete cds
1180	13782	26291	6.32	0.0E+00	7657468	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
1180	13782	26292	6.32	0.0E+00	7657468	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
1184	13785	26295	2.19	0.0E+00	7708500	NT	Homo sapiens Npw38-binding protein Npw38P (LOC51729), mRNA
1185	13786	26296	1.92	0.0E+00	X95826.1	NT	H. sapiens ART4 gene
1185	13786	26297	1.92	0.0E+00	X95826.1	NT	H. sapiens ART4 gene
1186	13787	26298	2.16	0.0E+00	AI147650.1	EST_HUMAN	qb22d10.x1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:1697011 3'

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Table 4  
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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1188	13789	26300	1.59	0.0E+00	AB020710.1	NT	Homo sapiens mRNA for KIAA0903 protein, partial cds
1197	13798	26309	0.7	0.0E+00	4758081	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (versican) (CSPG2) mRNA
1197	13798	26310	0.7	0.0E+00	4758081	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (versican) (CSPG2) mRNA
1198	13799	26311	1	0.0E+00	9968844	NT	Homo sapiens chromosome 12 open reading frame 3 (C12ORF3), mRNA
1210	13810	26323	3.09	0.0E+00	7305076	NT	Homo sapiens glutamate decarboxylase 1 (brain, 87kD) (GAD1), transcript variant GAD25, mRNA
1210	13810	26324	3.09	0.0E+00	7305076	NT	Homo sapiens glutamate decarboxylase 1 (brain, 87kD) (GAD1), transcript variant GAD25, mRNA
1213	13813	26327	1.78	0.0E+00	AB037835.1	NT	Homo sapiens mRNA for KIAA1414 protein, partial cds
1220	13820	26336	8.63	0.0E+00	4557887	NT	Homo sapiens keratin 18 (KRT18) mRNA
1251	13848		0.85	0.0E+00	7657336	NT	Homo sapiens mult. (E. coli) homolog 3 (MLH3), mRNA
1265	13862	26379	0.83	0.0E+00	8922593	NT	Homo sapiens hypothetical protein FLJ10697 (FLJ10697), mRNA
1269	13866	26383	2.13	0.0E+00	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
1269	13866	26384	2.13	0.0E+00	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
1270	13867	26385	2.51	0.0E+00	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
1271	15436	26388	2.03	0.0E+00	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
1289	13884	26409	6.85	0.0E+00	AF109718.1	NT	Homo sapiens chromosome 3 subtelomeric region
1290	13885	26410	1.33	0.0E+00	4503098	NT	Homo sapiens chondroitin sulfate proteoglycan 4 (melanoma-associated) (CSPG4), mRNA
1300	13894	26416	0.83	0.0E+00	4505740	NT	Homo sapiens prefoldin 4 (PFDN4) mRNA
1309	13903		2.3	0.0E+00	Y18000.1	NT	Homo sapiens NF2 gene
1317	13911	26431	160.44	0.0E+00	4506718	NT	Homo sapiens ribosomal protein S2 (RPS2) mRNA
1324	13918	26440	3.35	0.0E+00	AF084479.1	NT	Homo sapiens Williams-Beuren syndrome deletion transcript 9 (WBSCH9) mRNA, complete cds
1331	13925	26445	1.6	0.0E+00	AB040940.1	NT	Homo sapiens mRNA for KIAA1507 protein, partial cds
1331	13925	26446	1.6	0.0E+00	AB040940.1	NT	Homo sapiens mRNA for KIAA1507 protein, partial cds
1343	13938	26459	2.36	0.0E+00	5174748	NT	Homo sapiens Wolfram syndrome (WFS) mRNA
1343	13938	26460	2.36	0.0E+00	5174748	NT	Homo sapiens Wolfram syndrome (WFS) mRNA
1343	13938	26461	2.36	0.0E+00	5174748	NT	Homo sapiens Wolfram syndrome (WFS) mRNA
1344	13939		2.61	0.0E+00	AF096156.1	NT	Homo sapiens protein phosphatase 2A BR gamma subunit gene, exon 5
1354	15438	26473	2.05	0.0E+00	7657529	NT	Homo sapiens rhabdoid tumor deletion region protein 1 (RTDR1), mRNA
1354	15438	26474	2.05	0.0E+00	7657529	NT	Homo sapiens rhabdoid tumor deletion region protein 1 (RTDR1), mRNA
1360	13954	26480	4.79	0.0E+00	5803146	NT	Homo sapiens ring finger protein 9 (RNF9), mRNA
1361	13955	26481	1.2	0.0E+00	4508004	NT	Homo sapiens zinc finger protein 173 (ZNF173) mRNA
1363	13957	26482	0.97	0.0E+00	Y07829.2	NT	Homo sapiens RFB30 gene for RING finger protein
1364	13958	26483	4.9	0.0E+00	5803146	NT	Homo sapiens ring finger protein 9 (RNF9), mRNA
1365	13959	26484	1.23	0.0E+00	4508004	NT	Homo sapiens zinc finger protein 173 (ZNF173) mRNA
1367	13961	26486	3.51	0.0E+00	AB011149.1	NT	Homo sapiens mRNA for KIAA0577 protein, complete cds

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1368	13982	26487	2.76	0.0E+00	7661965	NT	Homo sapiens KIAA0170 gene product (KIAA0170), mRNA
1369	13983	26488	4.67	0.0E+00	7661965	NT	Homo sapiens KIAA0170 gene product (KIAA0170), mRNA
1370	13984	26489	4.11	0.0E+00	8567387	NT	Homo sapiens period (Drosophila) homolog 3 (PER3), mRNA
1370	13984	26490	4.11	0.0E+00	8567387	NT	Homo sapiens period (Drosophila) homolog 3 (PER3), mRNA
1382	13975	26503	1	0.0E+00	M14123.1	NT	Human endogenous retrovirus HERV-K10
1442	14035	26563	0.96	0.0E+00	BE257955.1	EST_HUMAN	601109792F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3350471 5'
1442	14035	26564	0.96	0.0E+00	BE257955.1	EST_HUMAN	601109792F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3350471 5'
1454	14046	26576	0.92	0.0E+00	AJ250014.1	NT	Homo sapiens mRNA for Familial Cylindromatosis cyd gene
1482	14054	26587	1.2	0.0E+00	AJ208756.1	EST_HUMAN	qg3ab05.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1837427 3' similar to WP:127A1.5 CE14213;
1483	14055	26588	11.41	0.0E+00	6042208	NT	RAN, member RAS oncogene family:Homo sapiens RAN, member RAS oncogene family (RAN), mRNA
1472	14084	26599	1	0.0E+00	4505648	NT	Homo sapiens protein convertase subtilisin/kexin type 2 (PCSK2) mRNA
1472	14084	26600	1	0.0E+00	4505648	NT	Homo sapiens protein convertase subtilisin/kexin type 2 (PCSK2) mRNA
1474	14086	26603	3.26	0.0E+00	7705565	NT	Homo sapiens KIAA1114 protein (KIAA1114), mRNA
1474	14086	26604	3.26	0.0E+00	7705565	NT	Homo sapiens KIAA1114 protein (KIAA1114), mRNA
1477	14089	26606	7.19	0.0E+00	AJ238093.1	NT	Homo sapiens partial AF-4 gene, exons 2 to 7 and Alu repeat elements
1488	14081	26620	3.54	0.0E+00	AF038280.1	NT	Homo sapiens alpha1-6fucosyltransferase (alpha1-6fucT) gene, exon 7
1510	14102	26638	3.27	0.0E+00	AL132999.1	NT	Novel human gene on chromosome 20
1512	14104	26639	1.4	0.0E+00	AL137784.1	NT	Novel human gene mapping to chromosome 1
1516	14108	26644	1.45	0.0E+00	D87077.1	NT	Human mRNA for KIAA0240 gene, partial cds
1519	14111	26647	9.86	0.0E+00	8912457	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
1521	14113	26649	2.74	0.0E+00	7661965	NT	Homo sapiens KIAA0170 gene product (KIAA0170), mRNA
1521	14113	26650	2.74	0.0E+00	7661965	NT	Homo sapiens KIAA0170 gene product (KIAA0170), mRNA
1558	14150	26682	1.8	0.0E+00	7708434	NT	Homo sapiens hHDC for homolog of Drosophila headcase (LOC51896), mRNA
1573	14196	26697	1.46	0.0E+00	AA481172.1	EST_HUMAN	aa34a03.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:815116 5'
1579	14172	26701	23.67	0.0E+00	AF023860.1	NT	Cercopithecus aethiops cyclophilin A mRNA, complete cds
1579	14172	26702	23.67	0.0E+00	AF023860.1	NT	Cercopithecus aethiops cyclophilin A mRNA, complete cds
1581	14174	26705	1.2	0.0E+00	AW976097.1	EST_HUMAN	EST368206 MAGe resequences MAGN Homo sapiens cDNA
1581	14174	26706	1.2	0.0E+00	AW976097.1	EST_HUMAN	EST368206 MAGe resequences MAGN Homo sapiens cDNA
1582	14175	26707	1.02	0.0E+00	D10884.1	NT	Bovine mRNA for neurocalcin
1584	14177		3.69	0.0E+00	U78027.1	NT	Homo sapiens Brulon's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3) genes, complete cds
1585	14178	26710	1.89	0.0E+00	4505404	NT	Homo sapiens transmembrane glycoprotein (GPNMB) mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1585	14178	26711	1.89	0.0E+00	4505404	NT	Homo sapiens transmembrane glycoprotein (GPNMB) mRNA
1586	14179	26712	3.3	0.0E+00	7662405	NT	Homo sapiens KIAA0957 protein (KIAA0957), mRNA
1587	14180		8.59	0.0E+00	7656972	NT	Homo sapiens TNF-inducible protein CG12-1 (CG12-1), mRNA
1593	14186	26718	8.96	0.0E+00	M98476.1	NT	Human transglutaminase mRNA, complete cds
1596	15445		25.62	0.0E+00	4509654	NT	Homo sapiens ribosomal protein L5 (RPL5) mRNA
1597	14189	26720	28.65	0.0E+00	M14199.1	NT	Human laminin receptor (2H5 epitope) mRNA, 5' and
1609	14202	26735	11.52	0.0E+00	4503098	NT	Homo sapiens chondroitin sulfate proteoglycan 4 (melanoma-associated) (CSPG4), mRNA
1617	14210		1.58	0.0E+00	D00333.1	NT	human c-yes-2 gene
1624	14217	26749	10.11	0.0E+00	Z83738.1	NT	H. sapiens HH2B/e gene
1625	14218	26750	2.24	0.0E+00	5921460	NT	Homo sapiens butyrophilin, subfamily 2, member A1 (BTN2A1), mRNA
1625	14218	26751	2.24	0.0E+00	5921460	NT	Homo sapiens butyrophilin, subfamily 2, member A1 (BTN2A1), mRNA
1626	14219	26752	7.63	0.0E+00	AV690831.1	EST_HUMAN	AV690831 GKC Homo sapiens cDNA clone GKCBOF02 5'
1626	14219	26753	7.63	0.0E+00	AV690831.1	EST_HUMAN	AV690831 GKC Homo sapiens cDNA clone GKCBOF02 5'
1628	15446	26754	2.78	0.0E+00	AB040905.1	NT	Homo sapiens mRNA for KIAA1473 protein, partial cds
1632	14224	26755	1.01	0.0E+00	AF157476.1	NT	Homo sapiens DNA polymerase zeta catalytic subunit (REV3) mRNA, complete cds
1634	14226	26756	3.22	0.0E+00	7662183	NT	Homo sapiens KIAA0569 gene product (KIAA0569), mRNA
1634	14226	26759	3.22	0.0E+00	7662183	NT	Homo sapiens KIAA0569 gene product (KIAA0569), mRNA
1636	14228	26760	37.34	0.0E+00	5729876	NT	Homo sapiens heat shock 70kD protein 10 (HSC71) (HSPA10), mRNA
1636	14228	26761	37.34	0.0E+00	5729876	NT	Homo sapiens heat shock 70kD protein 10 (HSC71) (HSPA10), mRNA
1638	14230	26763	0.87	0.0E+00	M91803.1	NT	Human sodium channel mRNA
1652	14244	26778	7.35	0.0E+00	H26973.1	EST_HUMAN	yo76c05.s1 Soares adult brain N2b4HB55Y Homo sapiens cDNA clone IMAGE:183848 3'
1661	14254	26789	1.46	0.0E+00	AB046829.1	NT	Homo sapiens mRNA for KIAA1609 protein, partial cds
1661	14254	26790	1.46	0.0E+00	AB046829.1	NT	Homo sapiens mRNA for KIAA1609 protein, partial cds
1680	14272	26805	0.9	0.0E+00	AW444637.1	EST_HUMAN	ULH-B13-gjw-c-04-Q-U1.s1 NCI_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:2733284 3'
1708	14301	26838	0.91	0.0E+00	A1768104.1	EST_HUMAN	wg81b07.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2371477 3' similar to TR:Q62788 Q62788 CYS2HIS2 ZINC FINGER PROTEIN ;
1709	14302	26839	2.5	0.0E+00	AF057177.1	NT	Homo sapiens T-cell receptor gamma V1 gene region
1713	14305	26843	1.38	0.0E+00	M29590.1	NT	Human zinc-finger protein 7 (ZFP7) mRNA, complete cds
1713	14305	26844	1.38	0.0E+00	M29590.1	NT	Human zinc-finger protein 7 (ZFP7) mRNA, complete cds
1715	14307	26846	6.78	0.0E+00	4557867	NT	Homo sapiens keratin 18 (KRT18) mRNA
1716	14308	26847	0.95	0.0E+00	7657085	NT	Homo sapiens v-ets avian erythroblastosis virus E26 oncogene related (ERG), mRNA
1720	14312	26850	0.95	0.0E+00	BE222374.1	EST_HUMAN	hu11405.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3188281 3' similar to TR:Q95147 MKP-1 LIKE PROTEIN TYROSINE PHOSPHATASE ;

Table 4

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1720	14312	26851	0.95	0.0E+00	BE222374.1	EST_HUMAN	hu11d05.x1 NCLOGAP_LU24 Homo sapiens cDNA clone IMAGE:3166281 3' similar to TR:O85147 O85147 MKP-1 LIKE PROTEIN TYROSINE PHOSPHATASE ;
1723	14314	26855	3.69	0.0E+00	H30132.1	EST_HUMAN	yo59e08.r1 Soares breast 3NblHbSt Homo sapiens cDNA clone IMAGE:182246 5' similar to gb:M84098 GAMMA-GLUTAMYL TRANSPEPTIDASE 5 PRECURSOR (HUMAN);
1723	14314	26858	3.69	0.0E+00	H30132.1	EST_HUMAN	yo59e08.r1 Soares breast 3NblHbSt Homo sapiens cDNA clone IMAGE:182246 5' similar to gb:M84099 GAMMA-GLUTAMYL TRANSPEPTIDASE 5 PRECURSOR (HUMAN);
1725	14316	26858	6.58	0.0E+00	Z80780.1	NT	H. sapiens H2B/h gene
1725	14316	26859	6.58	0.0E+00	Z80780.1	NT	H. sapiens H2B/h gene
1728	14319		20.47	0.0E+00	5031748	NT	Homo sapiens high-mobility group (nonhistone chromosomal) protein 17 (HMG17), mRNA
1737	14327	26871	4.38	0.0E+00	89223841	NT	Homo sapiens FOXJ2 forkhead factor (LOC55810), mRNA
1742	14332	26877	0.92	0.0E+00	M75980.1	NT	Human hepatocyte growth factor gene, exon 15
1742	14332	26878	0.92	0.0E+00	M75980.1	NT	Human hepatocyte growth factor gene, exon 15
1745	14335	26882	1.17	0.0E+00	4826873	NT	Homo sapiens RNA binding motif protein, Y chromosome, family 1, member A1 (RBM1A1) mRNA
1751	14341	26889	3.79	0.0E+00	AB026542.1	NT	Homo sapiens WAVE2 mRNA for WASP-family protein, complete cds
1753	14343		3.18	0.0E+00	S94400.1	NT	TCR zeta (human, Genomic/mRNA, 365 nt, segment 1 of 8)
1782	14352	26898	1.05	0.0E+00	4557538	NT	Homo sapiens solute carrier family 26 (sulfate transporter), member 2 (SLC26A2) mRNA
1781	14371	26916	2.35	0.0E+00	AF273841.1	NT	Homo sapiens SMCY (SMCY) gene, complete cds
1820	15450		35.11	0.0E+00	4506718	NT	Homo sapiens ribosomal protein S2 (RPS2) mRNA
1825	14414	26960	1.31	0.0E+00	4557556	NT	Homo sapiens E1A binding protein p300 (EP300) mRNA
1825	14414	26961	1.31	0.0E+00	4557556	NT	Homo sapiens E1A binding protein p300 (EP300) mRNA
1828	14417	26965	1.47	0.0E+00	U63963.1	NT	Human CSF-1 receptor (FMS) gene, complete cds, and (SMF) gene, partial cds
1831	15451	26969	5.45	0.0E+00	4505332	NT	Homo sapiens nuclear autoantigenic sperm protein (histone-binding) (NASP) mRNA
1843	14431	26984	13.62	0.0E+00	U14987.1	NT	Human ribosomal protein L21 mRNA, complete cds
1845	14433	26987	7.44	0.0E+00	AB002331.1	NT	Human mRNA for KIAA0333 gene, partial cds
1846	14434	26988	9.59	0.0E+00	4502284	NT	Homo sapiens activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) mRNA
1846	14434	26989	9.59	0.0E+00	4502284	NT	Homo sapiens activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) mRNA
1846	14434	26990	9.59	0.0E+00	4502284	NT	Homo sapiens activating transcription factor 4 (tax-responsive enhancer element B67) (ATF4) mRNA
1857	14445	27001	1.57	0.0E+00	4506328	NT	Homo sapiens protein tyrosine phosphatase, receptor-type, zeta polypeptide 1 (PTPRZ1) mRNA
1863	14450	27009	1.38	0.0E+00	4504626	NT	Homo sapiens immunoglobulin superfamily, member 3 (IGSF3) mRNA, and translated products
1863	14450	27010	1.38	0.0E+00	4504626	NT	Homo sapiens immunoglobulin superfamily, member 3 (IGSF3) mRNA, and translated products
1874	14460	27016	7.62	0.0E+00	6005855	NT	Homo sapiens Retina-derived POU-domain factor-1 (RPF-1), mRNA

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1874	14460	27017	7.62	0.0E+00	6005855	NT	Homo sapiens Retina-derived POU-domain factor-1 (RPF-1), mRNA
1884	14470	27027	0.93	0.0E+00	AB032978.1	NT	Homo sapiens mRNA for KIAA1152 protein, partial cds
1884	14470	27028	0.93	0.0E+00	AB032978.1	NT	Homo sapiens mRNA for KIAA1152 protein, partial cds
1888	14473	27030	5	0.0E+00	4828783	NT	Homo sapiens potassium voltage-gated channel, Shab-related subfamily, member 1 (KCNB1) mRNA
1888	14473	27031	5	0.0E+00	4828783	NT	Homo sapiens potassium voltage-gated channel, Shab-related subfamily, member 1 (KCNB1) mRNA
1889	14474	27032	8.6	0.0E+00	U07147.1	NT	Human retinal degeneration slow (RDS) gene, exon 1
1889	14474	27033	8.6	0.0E+00	U07147.1	NT	Human retinal degeneration slow (RDS) gene, exon 1
1892	14477	27036	1.32	0.0E+00	AW207280.1	EST_HUMAN	UI-H-B11-afn-f07-0-UI st NCI CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2722333 3'
1892	14477	27037	1.32	0.0E+00	AW207280.1	EST_HUMAN	UI-H-B11-afn-f07-0-UI st NCI CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2722333 3'
1916	14501	27056	3.38	0.0E+00	BE277465.1	EST_HUMAN	601179164F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3547239 5'
1916	14501	27057	3.38	0.0E+00	BE277465.1	EST_HUMAN	601179164F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3547239 5'
1939	14523	27079	1.77	0.0E+00	BE006282.1	EST_HUMAN	RC2-BN0126-200300-012-604 BN0126 Homo sapiens cDNA
1967	14551	27106	2.92	0.0E+00	4506384	NT	Homo sapiens RAD1 (S. pombe) homolog (RAD1) mRNA, and translated products
1967	14551	27107	2.92	0.0E+00	4506384	NT	Homo sapiens RAD1 (S. pombe) homolog (RAD1) mRNA, and translated products
1975	14559	27116	1.84	0.0E+00	AF157476.1	NT	Homo sapiens DNA polymerase zeta catalytic subunit (REV3) mRNA, complete cds
1976	15455	27116	2.72	0.0E+00	M98478.1	NT	Human transglutaminase mRNA, complete cds
1976	15455	27117	2.72	0.0E+00	M98478.1	NT	Human transglutaminase mRNA, complete cds
1981	14594	27124	1.69	0.0E+00	4507464	NT	Homo sapiens transforming growth factor, beta 3 (TGFB3), mRNA
1981	14594	27125	1.69	0.0E+00	4507464	NT	Homo sapiens transforming growth factor, beta 3 (TGFB3), mRNA
1985	14567		5.68	0.0E+00	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
1990	14572		5.14	0.0E+00	M56832.1	NT	Human topoisomerase I pseudogene 1
1998	14581	27139	3.45	0.0E+00	4809282	NT	Homo sapiens histidine ammonio-lyase (HAL) mRNA
1998	14581	27140	3.45	0.0E+00	4809282	NT	Homo sapiens histidine ammonio-lyase (HAL) mRNA
2008	14591		0.99	0.0E+00	AL163252.2	NT	Homo sapiens chromosome 21 segment HS21C052
2011	14593	27153	1.13	0.0E+00	8400716	NT	Homo sapiens nebulin (NEB), mRNA
2011	14593	27154	1.13	0.0E+00	8400716	NT	Homo sapiens nebulin (NEB), mRNA
2012	14593	27155	2.07	0.0E+00	4826638	NT	Homo sapiens actinin, alpha 4 (ACTN4) mRNA
2012	14594	27156	2.07	0.0E+00	4826638	NT	Homo sapiens actinin, alpha 4 (ACTN4) mRNA
2024	14606	27171	1.03	0.0E+00	AB018333.1	NT	Homo sapiens mRNA for KIAA0790 protein, partial cds
2024	14606	27172	1.03	0.0E+00	AB018333.1	NT	Homo sapiens mRNA for KIAA0790 protein, partial cds
2030	14612	27176	1.43	0.0E+00	M33782.1	NT	Human TFEB protein mRNA, partial cds



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2030	14612	27177	1.43	0.0E+00	M33782.1	NT	Human TFEB protein mRNA, partial cds
2032	14614	27178	0.89	0.0E+00	AW193024.1	EST_HUMAN	X69501.x1 NCI_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2876913 3'
2032	14614	27179	0.89	0.0E+00	AW193024.1	EST_HUMAN	X69501.x1 NCI_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2876913 3'
2033	14615	27180	7.94	0.0E+00	6912457	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
2033	14615	27181	7.94	0.0E+00	6912457	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
2035	14617	27183	0.88	0.0E+00	AB011149.1	NT	Homo sapiens mRNA for KIAA0577 protein, complete cds
2036	14618	27184	0.92	0.0E+00	Z47556.1	NT	H. sapiens genes for semenogelin I and semenogelin II
2036	14618	27185	0.92	0.0E+00	Z47556.1	NT	H. sapiens genes for semenogelin I and semenogelin II
2043	14625	27194	2.25	0.0E+00	AB040946.1	NT	Homo sapiens mRNA for KIAA1513 protein, partial cds
2097	14676	27245	0.94	0.0E+00	7706742	NT	Homo sapiens TP53TG3a (TP53TG3a), mRNA
2102	14681	27249	2.71	0.0E+00	BE743215.1	EST_HUMAN	601573895F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3835188 5'
2102	14681	27250	2.71	0.0E+00	BE743215.1	EST_HUMAN	601573895F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3835188 5'
2104	14683	27251	1.39	0.0E+00	4503648	NT	Homo sapiens coagulation factor IX (plasma thromboplastic component, Christmas disease, hemophilia B) (F9) mRNA
2105	14684	27252	3.79	0.0E+00	AU140831.1	EST_HUMAN	AU140831 PLACE4 Homo sapiens cDNA clone PLACE4000321 5'
2106	14066	26603	1.97	0.0E+00	7705565	NT	Homo sapiens KIAA1114 protein (KIAA1114), mRNA
2106	14066	26604	1.97	0.0E+00	7705565	NT	Homo sapiens KIAA1114 protein (KIAA1114), mRNA
2108	14686	27254	1.59	0.0E+00	AA077589.1	EST_HUMAN	7B22E10 Chromosome 7 Fetal Brain cDNA Library Homo sapiens cDNA clone 7B22E10
2108	14686	27255	1.59	0.0E+00	AA077589.1	EST_HUMAN	7B22E10 Chromosome 7 Fetal Brain cDNA Library Homo sapiens cDNA clone 7B22E10
2110	14688		1.75	0.0E+00	7657468	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
2112	14690		1.76	0.0E+00	4585863	NT	Homo sapiens phosphodiesterase 6A, cGMP-specific, rod, alpha (PDE6A), mRNA
2114	14692		2.2	0.0E+00	A1244247.1	EST_HUMAN	qv90708.x1 NCI_CGAP_U12 Homo sapiens cDNA clone IMAGE:1888871 3' similar to contains Alu repetitive element;
2119	14697	27266	2.72	0.0E+00	BE877225.1	EST_HUMAN	601485146F1 NIH_MGC_89 Homo sapiens cDNA clone IMAGE:3887747 5'
2121	14699	27268	1.8	0.0E+00	BF315325.1	EST_HUMAN	601902604F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4135320 5'
2121	14699	27269	1.8	0.0E+00	BF315325.1	EST_HUMAN	601902604F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4135320 5'
2126	14704	27275	2.31	0.0E+00	BE697125.1	EST_HUMAN	RC3-CT0413-270700-022-d10 CT0413 Homo sapiens cDNA
2126	14704	27276	2.31	0.0E+00	BE697125.1	EST_HUMAN	RC3-CT0413-270700-022-d10 CT0413 Homo sapiens cDNA
2133	14711	27283	2.79	0.0E+00	L00620.1	NT	Human plasma membrane calcium ATPase isoform 2 (APT2B2) mRNA, complete cds
2133	14711	27284	2.79	0.0E+00	L00620.1	NT	Human plasma membrane calcium ATPase isoform 2 (APT2B2) mRNA, complete cds
2134	14712	27285	1.61	0.0E+00	AJ297709.1	NT	Homo sapiens mRNA for GDC2L5 protein kinase, (GDC2L5 gene), isoform 1
2139	14717	27289	1.28	0.0E+00	4758489	NT	Homo sapiens GTP binding protein 1 (GTPBP1) mRNA
2143	14721	27292	34.67	0.0E+00	BE500995.1	EST_HUMAN	7a34c02.x1 NCI_CGAP_GC8 Homo sapiens cDNA clone IMAGE:3220810 3' similar to SW:DTD_HUMAN P50443 SULFATE TRANSPORTER ;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2160	14737		2.08	0.0E+00	BE787964.1	EST_HUMAN	QV1-GN0065-140800-318-c10 GN0065 Homo sapiens cDNA
2161	14738		1.8	0.0E+00	AF018963.1	NT	Homo sapiens X-linked juvenile retinoschisis protein (XLRS1) gene, exon 6 and complete cds
2163	14740	27310	3.84	0.0E+00	BF027562.1	EST_HUMAN	601672066F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3954785 5'
2165	14742	27311	0.98	0.0E+00	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
2166	14743	27312	1.35	0.0E+00	AW752708.1	EST_HUMAN	IL3-CT0219-271099-022-G10 CT0219 Homo sapiens cDNA
2168	14745	27314	6.51	0.0E+00	AI904640.1	EST_HUMAN	QV-BT065-020399-092 BT065 Homo sapiens cDNA
2168	14745	27315	6.51	0.0E+00	AI904640.1	EST_HUMAN	QV-BT065-020399-092 BT065 Homo sapiens cDNA
2202	14778		0.97	0.0E+00	7657252	NT	Homo sapiens potassium large conductance calcium-activated channel, subfamily M, beta member 3-like (KCNCMB3L), mRNA
2224	14799		1.37	0.0E+00	L14787.1	NT	Human DNA-binding protein mRNA, 3'end
2230	14805	27377	10.57	0.0E+00	AV738288.1	EST_HUMAN	AV738288 CB Homo sapiens cDNA clone CBNDE08 5'
2230	14805	27378	10.57	0.0E+00	AV738288.1	EST_HUMAN	AV738288 CB Homo sapiens cDNA clone CBNDE08 5'
2232	14807	27380	1.12	0.0E+00	AA931691.1	EST_HUMAN	cc32607.s1 NCJ CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1587896 3'
2234	14809		7.75	0.0E+00	M19828.1	NT	Human apolipoprotein B-100 (apoB) gene, exons 22 through 29
2236	14811	27383	10.88	0.0E+00	BF344434.1	EST_HUMAN	602014629F1 NCI CGAP_Bm64 Homo sapiens cDNA clone IMAGE:4150734 5'
2237	14812	27384	20.34	0.0E+00	BE748899.1	EST_HUMAN	601572186T1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:3839012 3'
2240	14815	27387	2.59	0.0E+00	BF377897.1	EST_HUMAN	CM1-TN0141-250800-439-508 TN0141 Homo sapiens cDNA
2240	14815	27388	2.59	0.0E+00	BF377897.1	EST_HUMAN	CM1-TN0141-250800-439-508 TN0141 Homo sapiens cDNA
2244	15461	27393	2.04	0.0E+00	BF313617.1	EST_HUMAN	601900261F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4129622 5'
2247	14821	27396	1.56	0.0E+00	BE018750.1	EST_HUMAN	bb84e02.y1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3049082 5' similar to TR:Q15170 Q15170 TRANSCRIPTION FACTOR S-II-RELATED PROTEIN;
2248	14822	27397	0.94	0.0E+00	AA042813.1	EST_HUMAN	zk53c07.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:486540 3' similar to gb:X65857_cds1 OLFACTORY RECEPTOR-LIKE PROTEIN HGMP07E (HUMAN);
2248	14822	27398	0.94	0.0E+00	AA042813.1	EST_HUMAN	zk53c07.s1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:486540 3' similar to gb:X65857_cds1 OLFACTORY RECEPTOR-LIKE PROTEIN HGMP07E (HUMAN);
2256	14830	27406	2.87	0.0E+00	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
2256	14830	27407	2.87	0.0E+00	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
2257	14831	27408	0.98	0.0E+00	7662401	NT	Homo sapiens KIAA0952 protein (KIAA0952), mRNA
2257	14831	27409	0.98	0.0E+00	7662401	NT	Homo sapiens KIAA0952 protein (KIAA0952), mRNA
2262	14836		1.58	0.0E+00	U36264.1	NT	Human beta-prime-adaptin (BAM22) gene, exon 16
2263	14837	27414	0.91	0.0E+00	AA282281.1	EST_HUMAN	zt12b10.r1 NCI CGAP_GCB1 Homo sapiens cDNA clone IMAGE:712891 5'
2270	14844	27420	0.92	0.0E+00	BE897487.1	EST_HUMAN	601432317F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3917453 5'
2271	14845		4.79	0.0E+00	M20903.1	NT	Human apolipoprotein C-I pseudogene, complete cds

Table 4

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2282	14856	27433	6.26	0.0E+00	4557556	NT	Homo sapiens E1A binding protein p300 (EP300) mRNA
2288	14882	27437	1.15	0.0E+00	7682401	NT	Homo sapiens KIAA0952 protein (KIAA0952) mRNA
2295	14869	27445	1.05	0.0E+00	BE895281.1	EST_HUMAN	601433525F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3918607 5'
2299	14872	27448	1.28	0.0E+00	AB037784.1	NT	Homo sapiens mRNA for KIAA1363 protein, partial cds
2339	14910	27482	3.84	0.0E+00	11545748	NT	Homo sapiens differentially expressed in FDCP (mouse homolog) 6 (DEF6), mRNA
2339	14910	27483	3.84	0.0E+00	11545748	NT	Homo sapiens differentially expressed in FDCP (mouse homolog) 6 (DEF6), mRNA
2340	14911	27484	2.06	0.0E+00	AI076404.1	EST_HUMAN	oz09c07.x1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:1674828 3'
2342	14913	27486	1.81	0.0E+00	AA429001.1	EST_HUMAN	zv78a11.r1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:759740 5'
2342	14913	27487	1.81	0.0E+00	AA429001.1	EST_HUMAN	zv78a11.r1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:759740 5'
2344	14915	27489	1.98	0.0E+00	AA680367.1	EST_HUMAN	z11e12.s1 Soares_fetal_liver_spleen_INFLS_S1 Homo sapiens cDNA clone IMAGE:430510 3'
2345	14916	27490	3.65	0.0E+00	BF347039.1	EST_HUMAN	602021846F1 NCI_CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4157339 5'
2350	14921	27496	3.07	0.0E+00	L02840.1	NT	Homo sapiens potassium channel Kv2.1 mRNA, complete cds
2351	14922	27497	1.6	0.0E+00	6325466	NT	Homo sapiens flavin containing monooxygenase 3 (FMO3), mRNA
2358	14929	27503	1.17	0.0E+00	BE676095.1	EST_HUMAN	7122602.x1 NCI_CGAP_CLL1 Homo sapiens cDNA clone IMAGE:3295370 3' similar to TR:084939 084939
2360	14931	27504	5.89	0.0E+00	AF044571.1	NT	KIAA0957 PROTEIN
2361	14932	27505	2.94	0.0E+00	AI825542.1	EST_HUMAN	Homo sapiens phosphatase kinase alpha subunit (PHKA2) gene, exon 32
2366	14937	27509	1.72	0.0E+00	5803178	NT	ty57c08.x1 NCI_CGAP_U2 Homo sapiens cDNA clone IMAGE:2283182 3'
2366	14937	27510	1.72	0.0E+00	5803178	NT	Homo sapiens sperm specific antigen 2 (SSFA2), mRNA
2377	14946	27520	0.99	0.0E+00	D83778.1	NT	Homo sapiens sperm specific antigen 2 (SSFA2), mRNA
2377	14946	27521	0.99	0.0E+00	D83778.1	NT	Human mRNA for KIAA0194 gene, partial cds
2378	14947		1.07	0.0E+00	4557521	NT	Homo sapiens delodolase, iodotyrosine, type I (DIO1) mRNA
2387	14956	27527	2.83	0.0E+00	5174678	NT	Homo sapiens signal regulatory protein, beta, 1 (SIRP-BETA-1) mRNA
2381	14959	27531	1.95	0.0E+00	AU131142.1	EST_HUMAN	AU131142 NT2RP3 Homo sapiens cDNA clone NT2RP3002084 5'
2392	14960		8.95	0.0E+00	BE794028.1	EST_HUMAN	601586843F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3941003 5'
2393	14961	27532	0.98	0.0E+00	AW867076.1	EST_HUMAN	MR1-SN0033-120400-002-a04 SN0033 Homo sapiens cDNA
2394	14962	27533	5.08	0.0E+00	7682017	NT	Homo sapiens KIAA0244 protein (KIAA0244), mRNA
2395	14963	27534	1.69	0.0E+00	4758497	NT	Homo sapiens hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase) (H6PD), mRNA
2395	14963	27535	1.69	0.0E+00	4758497	NT	Homo sapiens hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase) (H6PD), mRNA
2396	14964		3.28	0.0E+00	AF280107.1	NT	Homo sapiens cytochrome P450 polypeptide 43 (CYP3A43) gene, partial cds; cytochrome P450 polypeptide 4 (CYP3A4) and cytochrome P450 polypeptide 7 (CYP3A7) genes, complete cds; and cytochrome P450
2398	14966	27537	10.16	0.0E+00	AU118082.1	EST_HUMAN	polypeptide 5 (CYP3A5) gene, partial cds
2398	14966	27538	10.16	0.0E+00	AU118082.1	EST_HUMAN	AU118082 HEMBA1 Homo sapiens cDNA clone HEMBA1002839 5'
2398	14966	27538	10.16	0.0E+00	AU118082.1	EST_HUMAN	AU118082 HEMBA1 Homo sapiens cDNA clone HEMBA1002839 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2398	14966	27539	10.16	0.0E+00	AU118082.1	EST_HUMAN	AU118082 HEMBA1 Homo sapiens cDNA clone HEMBA1002839 5'
2458	15025	27595	4.3	0.0E+00	AU118582.1	EST_HUMAN	AU118582 HEMBA1 Homo sapiens cDNA clone HEMBA1006155 5'
2459	15026		3.3	0.0E+00	AU042035.1	EST_HUMAN	ox60b02.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1660683 3' similar to TR:O08662
2460	15027	27598	1.06	0.0E+00	8923620	NT	O08662 230KDA PHOSPHATIDYLINOSITOL 4-KINASE. ; Homo sapiens hypothetical protein FLJ20693 (FLJ20693). mRNA
2463	15030	27598	1.3	0.0E+00	AW303998.1	EST_HUMAN	xv15f07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2813221 3' similar to TR:O54924 O54924 EXO84. ;
2465	15032		1.28	0.0E+00	BE895605.1	EST_HUMAN	601432608F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3918168 5'
2476	15043		1.17	0.0E+00	AB005622.1	EST_HUMAN	AB005622 Hela cDNA (T.Noma) Homo sapiens cDNA similar to adenylate kinase isozyme 2
2480	15046	27615	8.35	0.0E+00	6006002	NT	Homo sapiens glutamate receptor, ionotropic, N-methyl D-aspartate 2A (GRIN2A) mRNA
2484	15049	27618	1.94	0.0E+00	D85606.1	NT	Homo sapiens gene for cholecystokinin type-A receptor, complete cds
2484	15049	27620	1.94	0.0E+00	D85606.1	NT	Homo sapiens gene for cholecystokinin type-A receptor, complete cds
2491	15056	27629	3.24	0.0E+00	AF106275.1	NT	Homo sapiens immunoglobulin-like transcript 1c variant 4 (LIT1c) gene, exon 6
2499	15063	27638	3.07	0.0E+00	572977	NT	Homo sapiens collagen, type XII, alpha 1 (COL12A1), mRNA
2507	15071	27644	4.18	0.0E+00	BF569144.1	EST_HUMAN	602184558T1 NIH_MGC_42 Homo sapiens cDNA clone IMAGE:4300383 3'
2518	15082	27655	2.85	0.0E+00	AW466922.1	EST_HUMAN	ha04f04.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2872759 3'
2520	15084	27656	2.91	0.0E+00	AW501010.1	EST_HUMAN	UI-HF-BP0p-als-c-07-0-UJr1 NIH_MGC_51 Homo sapiens cDNA clone IMAGE:3072780 5'
2529	15093		1.39	0.0E+00	AI287878.1	EST_HUMAN	qv23f06.x1 NCI_CGAP_Lym6 Homo sapiens cDNA clone IMAGE:1882435 3' similar to contains element MIR repetitive element ;
2537	15101	27674	1.54	0.0E+00	5453965	NT	Homo sapiens protein kinase, AMP-activated, alpha 2 catalytic subunit (PRKAA2) mRNA
2537	15101	27675	1.54	0.0E+00	5453965	NT	Homo sapiens protein kinase, AMP-activated, alpha 2 catalytic subunit (PRKAA2) mRNA
2548	15112		1.81	0.0E+00	AW813853.1	EST_HUMAN	RC3-ST0197-300300-016-c04 ST0197 Homo sapiens cDNA
2552	15116	27686	9.72	0.0E+00	BE795542.1	EST_HUMAN	601592530F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3946518 5'
2553	15117	27687	1.32	0.0E+00	BF509482.1	EST_HUMAN	UI-H-BI4-eoz-b-08-0-UJr1 NCI_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3086535 3'
2555	15119	27689	1.52	0.0E+00	Z32884.2	NT	Homo sapiens mRNA for membrane transport protein (XK gene)
2557	15121		3.57	0.0E+00	545387.1	NT	Homo sapiens platelet-derived growth factor receptor-like (PDGFR) mRNA
2559	15123	27692	0.89	0.0E+00	BE910378.1	EST_HUMAN	601503356F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3905148 5'
2560	15124	27693	3.1	0.0E+00	7657468	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
2561	15125	27694	3.58	0.0E+00	BE150865.1	EST_HUMAN	RC4-H10276-160200-013-d05 HT0276 Homo sapiens cDNA
2562	15126	27695	1.24	0.0E+00	8923340	NT	Homo sapiens hypothetical protein FLJ20366 (FLJ20366). mRNA
2563	15127	27696	3	0.0E+00	U93239.1	NT	Human Sec62 (Sec62) mRNA, complete cds
2568	15132	27700	1.34	0.0E+00	BE886490.1	EST_HUMAN	601508211F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3909866 5'
2571	15134	27704	4.84	0.0E+00	BE875511.1	EST_HUMAN	601489241F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3891371 5'
2571	15134	27705	4.84	0.0E+00	BE875511.1	EST_HUMAN	601489241F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3891371 5'

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2587	15150	27714	0.9	0.0E+00	BE536921.1	EST_HUMAN	60106473BF1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3451181 5'
2592	15154	27721	9.34	0.0E+00	AU143277.1	EST_HUMAN	AU143277 Y79AA1 Homo sapiens cDNA clone Y79AA1001673 5'
2592	15154	27722	9.34	0.0E+00	AU143277.1	EST_HUMAN	AU143277 Y79AA1 Homo sapiens cDNA clone Y79AA1001673 5'
2593	15155	27723	0.9	0.0E+00	BE292896.1	EST_HUMAN	601105312F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2987955 5'
2593	15155	27724	0.9	0.0E+00	BE292896.1	EST_HUMAN	601105312F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2987955 5'
2596	15156	27726	8.62	0.0E+00	AF245505.1	NT	Homo sapiens adiccan mRNA, complete cds
2633	15402	27768	1.76	0.0E+00	AB037836.1	NT	Homo sapiens mRNA for KIAA1415 protein, partial cds
2633	15402	27767	1.76	0.0E+00	AB037836.1	NT	Homo sapiens mRNA for KIAA1415 protein, partial cds
2634	15194		3.12	0.0E+00	BF513835.1	EST_HUMAN	U1H-BW1-amp-f-12-Q-U1.31 NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3070631 3'
2643	15202	27775	1.24	0.0E+00	A1571737.1	EST_HUMAN	in19b08.x1 NCI_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2168055 3' similar to gb.L20877 CALCIUM-TRANSPORTING ATPASE PLASMA MEMBRANE, BRAIN ISOFORM 2 (HUMAN);
2644	15203	27776	2.06	0.0E+00	5032150	NT	Homo sapiens TATA box binding protein (TBP)-associated factor, RNA polymerase II, 1, 28kD (TAF21) mRNA
2647	15206	27779	6.91	0.0E+00	AB037859.1	NT	Homo sapiens mRNA for KIAA1438 protein, partial cds
2648	15207	27780	0.99	0.0E+00	BE795445.1	EST_HUMAN	601590108F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3944304 5'
2648	15207	27781	0.99	0.0E+00	BE795445.1	EST_HUMAN	601590108F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3944304 5'
2651	15210	27782	1.16	0.0E+00	BE293328.1	EST_HUMAN	601143722F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:3051389 5'
2655	15214		5.98	0.0E+00	BE792472.1	EST_HUMAN	601584930F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3939222 5'
2663	15221	27793	1.73	0.0E+00	4504686	NT	Homo sapiens IMP (inosine monophosphate) dehydrogenase 1 (IMPDH1) mRNA
2671	15226		1.65	0.0E+00	U78027.1	NT	Homo sapiens Bruton's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3) genes, complete cds
2672	15230	27800	6.98	0.0E+00	AF173227.1	NT	Homo sapiens guanylate cyclase-activating protein 2 (GUCA1B) gene, exon 1
2676	15234	27801	2.15	0.0E+00	AB011108.1	NT	Homo sapiens mRNA for KIAA0536 protein, partial cds
2680	15238	27805	1.01	0.0E+00	AU130403.1	EST_HUMAN	AU130403 NT2RP3 Homo sapiens cDNA clone NT2RP3000779 5'
2680	15238	27806	1.01	0.0E+00	AU130403.1	EST_HUMAN	AU130403 NT2RP3 Homo sapiens cDNA clone NT2RP3000779 5'
2682	15240	27808	1.22	0.0E+00	AW887015.1	EST_HUMAN	RC1-OT0088-220300-011-d07 OT0086 Homo sapiens cDNA
2685	15243	27811	3.43	0.0E+00	BE383165.1	EST_HUMAN	601298714F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3628923 5'
2686	15244		2.17	0.0E+00	BE531263.1	EST_HUMAN	601278373F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3610267 5'
2712	15269	27837	1.4	0.0E+00	8922843	NT	Homo sapiens hypothetical protein FLJ11052 (FLJ11052), mRNA
2748	15303		9.58	0.0E+00	AA316723.1	EST_HUMAN	EST188414 HCC cell line (metastasis to liver in mouse) II Homo sapiens cDNA 5' end similar to ribosomal protein L29
2749	15304	27888	12.57	0.0E+00	BE794884.1	EST_HUMAN	601589625F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943591 5'
2755	15310	27876	2.37	0.0E+00	U36253.1	NT	Human beta-prime-adaptin (BAM22) gene, exon 5
2757	15312	27878	0.97	0.0E+00	7869517	NT	Homo sapiens neuregulin 1 (NRG1), transcript variant SMDF, mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2758	15313	27879	1.42	0.0E+00	AF110763.1	NT	Homo sapiens skeletal muscle LIM-protein 1 (FHL1) gene, complete cds
2760	15315	27881	1.23	0.0E+00	AB051826.1	NT	Homo sapiens hG28K mRNA for GTP-binding protein like 1, complete cds
2765	15319	27885	20.41	0.0E+00	BE796376.1	EST_HUMAN	601591991F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3945983 5'
2766	15320	27886	2.11	0.0E+00	BF680632.1	EST_HUMAN	602155923F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4297132 5'
2769	15476	27890	14.33	0.0E+00	BE563433.1	EST_HUMAN	601335485F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3689564 5'
2770	15323		1.77	0.0E+00	AV721647.1	EST_HUMAN	AV721647 HTB Homo sapiens cDNA clone HTBBYE09 5'
2772	15325	27893	2.47	0.0E+00	5174496	NT	Homo sapiens spermatogenesis associated PD1 (KIA00757) mRNA
2772	15325	27894	2.47	0.0E+00	5174486	NT	Homo sapiens spermatogenesis associated PD1 (KIA00757) mRNA
2773	15326	27895	1.25	0.0E+00	8923441	NT	Homo sapiens hypothetical protein FLJ20477 (FLJ20477), mRNA
2773	15326	27896	1.25	0.0E+00	8923441	NT	Homo sapiens hypothetical protein FLJ20477 (FLJ20477), mRNA
2774	15327	27897	2.27	0.0E+00	AV651066.1	EST_HUMAN	Homo sapiens hypertension-related calcium-regulated gene mRNA, complete cds
2775	15328		131.05	0.0E+00	AF651066.1	EST_HUMAN	AV651066 GLC Homo sapiens cDNA clone GLCCLD07 3'
2776	15329	27898	4.94	0.0E+00	BF377897.1	EST_HUMAN	CM1-TN0141-250900-439-508 TN0141 Homo sapiens cDNA
2776	15329	27899	4.94	0.0E+00	BF377897.1	EST_HUMAN	CM1-TN0141-250900-439-508 TN0141 Homo sapiens cDNA
2780	15333	27902	7.42	0.0E+00	4757963	NT	Homo sapiens cerebellar degeneration-related protein (34kD) (CDR1) mRNA
2780	15333	27903	7.42	0.0E+00	4757963	NT	Homo sapiens cerebellar degeneration-related protein (34kD) (CDR1) mRNA
2784	15337	27908	3.11	0.0E+00	BE747193.1	EST_HUMAN	601590903F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3929472 5'
2796	15349		0.98	0.0E+00	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
2797	15350	27919	2.76	0.0E+00	BF514110.1	EST_HUMAN	UI-H-BW1-amw-e-07-J-U.s1 NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3071340 3'
2804	15356		0.88	0.0E+00	4503098	NT	Homo sapiens chondroitin sulfate proteoglycan 4 (melanoma-associated) (CSPG4), mRNA
2809	15361	27928	1.76	0.0E+00	7705275	NT	Homo sapiens angiopoietin-3 (ANG-3), mRNA
2809	15361	27928	1.76	0.0E+00	7705275	NT	Homo sapiens angiopoietin-3 (ANG-3), mRNA
2810	15362	27930	4.3	0.0E+00	BF677694.1	EST_HUMAN	602085579F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4249915 5'
2814	15366	27936	1.1	0.0E+00	7427522	NT	Homo sapiens protein tyrosine phosphatase, receptor type, T (PTPRT), mRNA
2817	15369	27938	17.28	0.0E+00	AV725534.1	EST_HUMAN	AV725534 HTC Homo sapiens cDNA clone HTCCGA03 5'
2817	15369	27939	17.28	0.0E+00	AV725534.1	EST_HUMAN	AV725534 HTC Homo sapiens cDNA clone HTCCGA03 5'
2819	15371		9.44	0.0E+00	AI879163.1	EST_HUMAN	au55404.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2518663 5' similar to SW:R13A_HUMAN P40428 60S RIBOSOMAL PROTEIN L13A ;
2822	15374	27944	1.69	0.0E+00	BF530661.1	EST_HUMAN	602071957F1 NCI_CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4214879 5'
2823	15375	27945	7.68	0.0E+00	BE872768.1	EST_HUMAN	601450912F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3854642 5'
2825	15377	27946	1.55	0.0E+00	AU131494.1	EST_HUMAN	AU131494 NT2RP3 Homo sapiens cDNA clone NT2RP3002672 5'
2825	15377	27947	1.55	0.0E+00	AU131494.1	EST_HUMAN	AU131494 NT2RP3 Homo sapiens cDNA clone NT2RP3002672 5'
2826	15378	27948	34.11	0.0E+00	BE300344.1	EST_HUMAN	600944794F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2960806 5'
2826	15378	27949	34.11	0.0E+00	BE300344.1	EST_HUMAN	600944794F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2960806 5'

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2832	12861	25345	7.98	0.0E+00	S76830.1	NT	glycoprotein D=Duffy group antigen [human, blood, Genomic DNA, 3068 nt]
2835	13385		1.75	0.0E+00	AB033281.1	NT	Homo sapiens BTRCP2 mRNA for F-box and WD-repeats protein isoform C, complete cds
2841	13382	25881	1.88	0.0E+00	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
2841	13382	25882	1.88	0.0E+00	AF264750.1	NT	Homo sapiens ALR-like protein mRNA, partial cds
2848	13682	26192	3.33	0.0E+00	4503202	NT	Homo sapiens cytochrome P450, subfamily 1 (dioxin-inducible), polypeptide 1 (glaucoma 3, primary infantile) (CYP1B1) mRNA
2848	13682	26193	3.33	0.0E+00	4503202	NT	Homo sapiens cytochrome P450, subfamily 1 (dioxin-inducible), polypeptide 1 (glaucoma 3, primary infantile) (CYP1B1) mRNA
2881	15480	27956	4.7	0.0E+00	X85980.1	NT	H. sapiens serine hydroxymethyltransferase pseudogene
2882	15481		2.28	0.0E+00	AF068624.1	NT	Homo sapiens 5-aminolevulinic acid synthase 2 (ALAS2) gene, complete cds
2883	15482		1.63	0.0E+00	AB040960.1	NT	Homo sapiens mRNA for KIAA1527 protein, partial cds
2870	15488		1.06	0.0E+00	AJ238852.1	NT	Homo sapiens partial rpl3 gene for ribosomal protein L3, U82 snoRNA, U83a snoRNA and U83b snoRNA genes
2871	15489	27960	2.43	0.0E+00	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
2875	15493	27963	1.55	0.0E+00	M80902.1	NT	Human AHNK nucleoprotein mRNA, 5' end
2877	15495	27965	1.25	0.0E+00	BE154504.1	EST_HUMAN	PMO-HT0343-281289-003-e02 HT0343 Homo sapiens cDNA
2877	15495	27966	1.25	0.0E+00	BE154504.1	EST_HUMAN	PMO-HT0343-281289-003-e02 HT0343 Homo sapiens cDNA
2879	15497		1	0.0E+00	X73428.1	NT	H. sapiens Id3 gene for HLH type transcription factor
2881	15499		2.78	0.0E+00	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C068
2882	15500	27969	1.01	0.0E+00	7019584	NT	Homo sapiens zinc finger protein 221 (ZNF221), mRNA
2882	15500	27970	1.01	0.0E+00	7019584	NT	Homo sapiens zinc finger protein 221 (ZNF221), mRNA
2882	15500	27971	1.01	0.0E+00	7019584	NT	Homo sapiens zinc finger protein 221 (ZNF221), mRNA
2884	15502	27972	2.39	0.0E+00	M98478.1	NT	Human transglutaminase mRNA, complete cds
2888	15505	27975	15.68	0.0E+00	D50657.1	NT	Homo sapiens gamma-cytoplasmic actin (ACTGP3) pseudogene
2888	15505	27978	15.68	0.0E+00	D50657.1	NT	Homo sapiens gamma-cytoplasmic actin (ACTGP3) pseudogene
2891	15508	27979	1.95	0.0E+00	AL096857.1	NT	Novel human mRNA from chromosome 1, which has similarities to BAT2 genes
2892	15509		7.43	0.0E+00	Y10658.1	NT	H. sapiens mRNA for nuclear DNA helicase II
2893	15510		1.17	0.0E+00	AF152303.1	NT	Homo sapiens proteoglycan alpha G1 (PGDH-alpha-G1) mRNA, complete cds
2894	15511	27980	112.87	0.0E+00	4503470	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
2894	15511	27981	112.87	0.0E+00	4503470	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
2904	15521	27991	2.68	0.0E+00	4507280	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
2907	15524	27995	1.03	0.0E+00	AL047599.1	EST_HUMAN	DKFZ586G0621_r1 586 (synonym: hute1) Homo sapiens cDNA clone DKFZp586G0621
2908	15525	27996	1.64	0.0E+00	7661883	NT	Homo sapiens KIAA0054 gene product, Helicase (KIAA0054), mRNA
2908	15525	27997	1.64	0.0E+00	7661883	NT	Homo sapiens KIAA0054 gene product, Helicase (KIAA0054), mRNA

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2909	15526		2.8	0.0E+00	4503098	NT	Homo sapiens chondroitin sulfate proteoglycan 4 (melanoma-associated) (CSPG4), mRNA
2912	15529	27999	6.04	0.0E+00	BE081896.1	EST_HUMAN	QV2-BT0636-130400-138-h03 BT0636 Homo sapiens cDNA
2912	15529	28000	6.04	0.0E+00	BE081896.1	EST_HUMAN	QV2-BT0636-130400-138-h03 BT0636 Homo sapiens cDNA
2918	15535	28008	0.71	0.0E+00	8806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
2918	15535	28009	0.71	0.0E+00	8806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
2921	15538	28013	2.25	0.0E+00	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C008
2921	15538	28014	2.25	0.0E+00	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C008
2922	15539	28015	1.29	0.0E+00	AA215579.1	EST_HUMAN	z98b11.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:683517 3' similar to contains Alu repetitive element;
2929	15545		4.1	0.0E+00	Y19210.1	NT	Homo sapiens HHb5 gene for hair keratin, exons 1 to 9
2932	15548	28024	1.24	0.0E+00	4758279	NT	Homo sapiens EphA4 (EPHA4) mRNA
2934	15550	28027	41.84	0.0E+00	4503470	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
2936	15552	28029	1.65	0.0E+00	P52740	SWISSPROT	ZINC FINGER PROTEIN 132
2937	15553	28030	1.25	0.0E+00	AF152338.1	NT	Homo sapiens protocadherin gamma C4 (PCDH-gamma-C4) mRNA, complete cds
2946	15562	28037	0.92	0.0E+00	AI209084.1	EST_HUMAN	q94904.x1 Soares testis NIH Homo sapiens cDNA clone IMAGE:1838527 3' similar to
2954	15570	28045	1.78	0.0E+00	AB033093.1	NT	SW:CB20_HUMAN P52298 20 KD NUCLEAR CAP BINDING PROTEIN ;
2954	15570	28046	1.78	0.0E+00	AB033093.1	NT	Homo sapiens mRNA for KIAA1267 protein, partial cds
2955	15571	28047	6.84	0.0E+00	AB040941.1	NT	Homo sapiens mRNA for KIAA1508 protein, partial cds
2955	15571	28048	6.84	0.0E+00	AB040941.1	NT	Homo sapiens mRNA for KIAA1508 protein, partial cds
2958	15574	28051	3.14	0.0E+00	7661903	NT	Homo sapiens KIAA0100 gene product (KIAA0100), mRNA
2958	15574	28052	3.14	0.0E+00	7661903	NT	Homo sapiens KIAA0100 gene product (KIAA0100), mRNA
2959	15575	28053	3.48	0.0E+00	5174574	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (t(11q23) (Drosophila) homolog); translocated to, 4 (MLLT4) mRNA
2959	15575	28054	3.48	0.0E+00	5174574	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (t(11q23) (Drosophila) homolog); translocated to, 4 (MLLT4) mRNA
2964	15579	28058	1.12	0.0E+00	BF110702.1	EST_HUMAN	7n4d03.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3567028 3' similar to TR:Q9VLN1
2964	15579	28059	1.12	0.0E+00	BF110702.1	EST_HUMAN	Q9VLN1 CG17293 PROTEIN ;
2972	15588	28070	2.96	0.0E+00	4505084	NT	7n4d03.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3567028 3' similar to TR:Q9VLN1
2972	15588	28071	2.96	0.0E+00	4505084	NT	Homo sapiens melanoma antigen, family B, 4 (MAGEB4), mRNA
2981	15597	28077	1.82	0.0E+00	4758827	NT	Homo sapiens melanoma antigen, family B, 4 (MAGEB4), mRNA
2985	15601	28080	1.33	0.0E+00	X15309.1	NT	Homo sapiens neuritin III (NRXN3) mRNA
							H. sapiens NF-H gene, exon 4



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2985	15601	28081	1.33	0.0E+00	X15309.1	NT	H.sapiens NF-H gene, exon 4
2987	15603	28083	9.26	0.0E+00	AF106275.1	NT	Homo sapiens immunoglobulin-like transcript 1c variant 4 (ILT1c) gene, exon 6
3001	15617		1.28	0.0E+00	A1149880.1	EST_HUMAN	qf43f09.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1752809 3'
3009	15625	28103	0.72	0.0E+00	AF281074.1	NT	Homo sapiens neuropilin 2 (NRP2) gene, complete cds, alternatively spliced
3009	15625	28104	0.72	0.0E+00	AF281074.1	NT	Homo sapiens neuropilin 2 (NRP2) gene, complete cds, alternatively spliced
3010	15626	28105	1.24	0.0E+00	4508118	NT	Homo sapiens prospero-related homeobox 1 (PROX1) mRNA
3011	15627	28106	2.29	0.0E+00	AB004884.1	NT	Homo sapiens mRNA for PKU-alpha, partial cds
3023	15639	28116	1.93	0.0E+00	7662273	NT	Homo sapiens KIAA0737 gene product (KIAA0737), mRNA
3025	15641	28118	2.52	0.0E+00	5729755	NT	Homo sapiens calcium channel, voltage-dependent, gamma subunit 3 (CACNG3), mRNA
3025	15641	28119	2.52	0.0E+00	5729755	NT	Homo sapiens calcium channel, voltage-dependent, gamma subunit 3 (CACNG3), mRNA
3036	15652	28130	1.45	0.0E+00	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
3036	15652	28131	1.45	0.0E+00	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
3060	15678	28152	0.73	0.0E+00	AL183248.2	NT	Homo sapiens chromosome 21 segment HS21C048
3062	15678	28152	1.4	0.0E+00	M74098.1	NT	Human displacement protein (GCAAT) mRNA
3072	15687	28159	0.72	0.0E+00	4509882	NT	Homo sapiens semenogelin I (SEMG1) mRNA
3075	15690	28163	0.66	0.0E+00	AW976266.1	EST_HUMAN	EST388375 MAGE resequences, MAGN Homo sapiens cDNA
3080	15695		3.98	0.0E+00	AF186953.1	NT	Homo sapiens membrane-bound aminopeptidase P (KNPEP2) gene, complete cds
3083	15698	28171	20.17	0.0E+00	5579469	NT	Homo sapiens heat shock 70kD protein 1 (HSPA1A), mRNA
3083	15698	28172	20.17	0.0E+00	5579469	NT	Homo sapiens heat shock 70kD protein 1 (HSPA1A), mRNA
3085	15700		7.12	0.0E+00	AL359403.1	NT	Isoform 2 of a novel human mRNA from chromosome 22
3089	15704	28176	2.79	0.0E+00	AF017433.1	NT	Homo sapiens putative transcription factor CR53 (CR53) mRNA, partial cds
3092	15707						Homo sapiens transcription factor IGHM enhancer 3, JM11 protein, JM4 protein, JM5 protein, T54 protein, JM10 protein, A4 differentiation-dependent protein, triple LIM domain protein 8, and synaptophysin genes, complete cds; and L-type calcium channel a>
3112	15727	28198	2.39	0.0E+00	AF196779.1	NT	Human germline gene 16.1 for Ig lambda L-chain C region (IgL-C16.1)
3118	15732		3.45	0.0E+00	X03526.1	NT	Homo sapiens F-box protein FBL5 (FBL5) mRNA, complete cds
3122	15736	28205	1.69	0.0E+00	AF199355.1	NT	Homo sapiens melanoma-associated antigen (MAGE-C1) gene, complete cds
3140	15754	28221	1.74	0.0E+00	AF084589.1	NT	Homo sapiens SWI-SNF complex protein p270 mRNA, partial cds
3141	15755	28222	3.56	0.0E+00	AF265208.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
3146	15760	28226	5.25	0.0E+00	AF149773.1	NT	Homo sapiens KIAA0469 gene product (KIAA0469), mRNA
3147	15761	28227	4.35	0.0E+00	7662139	NT	Homo sapiens effector/receptor-like protein (OLFR 42B) gene, OLFR 42B-9110 allele, partial cds
3175	15788	28260	1.46	0.0E+00	AF042075.1	NT	Homo sapiens potassium voltage-gated channel, Shab-related subfamily, member 1 (KCNB1) mRNA
3185	15797	28269	3.49	0.0E+00	4826783	NT	Human ferritin heavy chain mRNA, complete cds
			48.14	0.0E+00	L20941.1	NT	

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3188	15800	28272	2.08	0.0E+00	AB011121.1	NT	Homo sapiens mRNA for KIAA0549 protein, partial cds
3188	15800	28273	2.08	0.0E+00	AB011121.1	NT	Homo sapiens mRNA for KIAA0549 protein, partial cds
3196	15808	28281	18.48	0.0E+00	T94870.1	EST_HUMAN	ye32903.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:119453 3' similar to SP:S28539
3210	15822	28298	1.23	0.0E+00	BF243336.1	EST_HUMAN	S28539 BASIC PROTEIN, 23K
3211	15823	28299	1.28	0.0E+00	AI968086.1	EST_HUMAN	601878507F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4107433 5'
3216	15828	28306	4.69	0.0E+00	X98922.1	NT	wu12110.x1 NCI CGAP_GC8 Homo sapiens cDNA clone IMAGE:2516803 3'
3216	15828	28307	4.69	0.0E+00	X98922.1	NT	H. sapiens mRNA for gamma-glutamyltransferase
3218	15830	28309	0.63	0.0E+00	AI685950.1	EST_HUMAN	H. sapiens mRNA for gamma-glutamyltransferase
3226	15838	28317	1.57	0.0E+00	4758827	NT	tu38908.x1 NCI CGAP_P128 Homo sapiens cDNA clone IMAGE:2253376 3' similar to SW:RASD_DICD1
3226	15838	28318	1.57	0.0E+00	4758827	NT	P03987 RAS-LIKE PROTEIN RASD
3233	15845	28325	10.75	0.0E+00	4504658	NT	Homo sapiens neuroxin III (NRXN3) mRNA
3234	15846	28326	0.92	0.0E+00	4507720	NT	Homo sapiens neuroxin III (NRXN3) mRNA
3234	15846	28327	0.92	0.0E+00	4507720	NT	Homo sapiens interleukin 1 receptor, type I (IL1R1) mRNA
3245	15857	28340	1	0.0E+00	AJ277692.1	NT	Homo sapiens titin (TTN) mRNA
3253	15865	28346	2.88	0.0E+00	M28699.1	NT	Homo sapiens titin (TTN) mRNA
3257	15869	28349	2.27	0.0E+00	4502098	NT	Homo sapiens partial TTN gene for titin
3263	15875	28357	0.96	0.0E+00	4758055	NT	Homo sapiens nucleolar phosphoprotein B23 (NPM1) mRNA, complete cds
3263	15875	28358	0.96	0.0E+00	4758055	NT	Homo sapiens solute carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 5 (SLC25A5), nuclear gene encoding mitochondrial protein, mRNA
3265	15877	28359	4.57	0.0E+00	AA774783.1	EST_HUMAN	Homo sapiens CREB binding protein (Rubinstein-Taybi syndrome) (CREBBP) mRNA
3273	15885	28367	4.14	0.0E+00	AF286598.1	NT	Homo sapiens CREB binding protein (Rubinstein-Taybi syndrome) (CREBBP) mRNA
3273	15885	28368	4.14	0.0E+00	AF286598.1	NT	aa87b1.1 s1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:971133 3'
3285	15896	28374	1.44	0.0E+00	4557590	NT	Homo sapiens angiotensin binding protein 1 mRNA, complete cds
3292	15903	28383	1.09	0.0E+00	4507720	NT	Homo sapiens angiotensin binding protein 1 mRNA, complete cds
3300	15911		0.96	0.0E+00	M65189.1	NT	Homo sapiens fibrillin 1 (Marfan syndrome) (FBN1) mRNA
						NT	Homo sapiens titin (TTN) mRNA
						NT	Human connexin 43 processed pseudogene
3301	15912	28390				NT	Homo sapiens HLA class III region containing tenascin X (tenascin-X) gene, partial cds; cytochrome P450 21-hydroxylase (CYP21B), complement component C4 (C4B) G11, helicase (SKI2W), RD, complement factor B (Bf), and complement component C2 (C2) genes, >
3303	15914	28392	1.7	0.0E+00	AF019413.1	NT	Homo sapiens very large G-protein coupled receptor-1 (VLGR1) mRNA, complete cds
3313	18001	28400	2.26	0.0E+00	4502014	NT	Homo sapiens A kinase (PRKA) anchor protein 1 (AKAP1), mRNA
3313	18001	28401	2.26	0.0E+00	4502014	NT	Homo sapiens A kinase (PRKA) anchor protein 1 (AKAP1), mRNA
3329	15839	28415	2.57	0.0E+00	AF285208.1	NT	Homo sapiens SWI-SNF complex protein p270 mRNA, partial cds

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3330	15940	28416	1.68	0.0E+00	8923624	NT	Homo sapiens hypothetical protein FLJ20695 (FLJ20695), mRNA
3355	15963	28440	1.02	0.0E+00	4885312	NT	Homo sapiens G protein-coupled receptor 24 (GPR24), mRNA
3368	15974	28451	5.8	0.0E+00	AI589294.1	EST_HUMAN	tr58f08.x2 NCI_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:222535 3' similar to SW:RL11_RAT
3369	15977	28454	1.4	0.0E+00	AW955400.1	EST_HUMAN	P25121 60S RIBOSOMAL PROTEIN L11, contains Alu repetitive element;
3374	15983	28460	2.28	0.0E+00	AF128893.1	NT	EST1367470 IMAGE resequences, MAGD Homo sapiens cDNA
3374	15983	28461	2.28	0.0E+00	AF128893.1	NT	Homo sapiens telomerase reverse transcriptase (TERT) gene, exons 1-8
3375	15984	28462	0.91	0.0E+00	7657213	NT	Homo sapiens telomerase reverse transcriptase (TERT) gene, exons 1-8
3375	15984	28463	0.91	0.0E+00	7657213	NT	Homo sapiens hormonally upregulated neu tumor-associated kinase (HUNK), mRNA
3378	15987	28465	1.23	0.0E+00	4502582	NT	Homo sapiens hormonally upregulated neu tumor-associated kinase (HUNK), mRNA
3378	15987	28466	1.23	0.0E+00	4502582	NT	Homo sapiens caspase 8, apoptosis-related cysteine protease (CASP8) mRNA
3382	15981	28469	13.03	0.0E+00	AF111163.1	NT	Homo sapiens caspase 8, apoptosis-related cysteine protease (CASP8) mRNA
3384	15993	28471	0.89	0.0E+00	AB040940.1	NT	Homo sapiens pyrin (MEFV) gene, complete cds
3403	16012	28491	1.08	0.0E+00	AI632569.1	EST_HUMAN	Homo sapiens mRNA for KIAA1507 protein, partial cds
3443	16051	28529	3.18	0.0E+00	AU123664.1	EST_HUMAN	wb1004.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2305278 3' similar to TR:Q91829 Q91829 ZINC FINGER PROTEIN, ;
3450	16057	28532	0.94	0.0E+00	7363433	NT	AU123664 NT2RM2 Homo sapiens cDNA clone NT2RM2000735 5'
3450	16057	28533	0.94	0.0E+00	7363433	NT	Homo sapiens effector/receptor, family 10, subfamily C, member 1 (OR10C1), mRNA
3453	16060	28535	1.88	0.0E+00	7708239	NT	Homo sapiens effector/receptor, family 10, subfamily C, member 1 (OR10C1), mRNA
3454	16061	28538	1.04	0.0E+00	AF211189.1	NT	Homo sapiens neuroblastoma-amplified protein (LOC51584), mRNA
3458	16065		1.03	0.0E+00	AW867015.1	EST_HUMAN	Homo sapiens T-type calcium channel alpha1 subunit Alpha1-i isoform (CACNA1I) mRNA, complete cds
3471	16077	28550	1.28	0.0E+00	7662401	NT	MR1-SN0033-100400-001-c08 SN0033 Homo sapiens cDNA
3471	16077	28551	1.28	0.0E+00	7662401	NT	Homo sapiens KIAA0952 protein (KIAA0952), mRNA
3472	16078	28552	1.05	0.0E+00	4502398	NT	Homo sapiens KIAA0952 protein (KIAA0952), mRNA
3475	16081	28554	1.72	0.0E+00	5803067	NT	Homo sapiens KIAA0952 protein (KIAA0952), mRNA
3484	15313	27879	1.56	0.0E+00	AF110763.1	NT	Homo sapiens beaded filament structural protein 1, filensin (BFSP1) mRNA
3489	16084	28567	2.36	0.0E+00	7657038	NT	Homo sapiens leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 2 (LILRA2), mRNA
3490	16095	28568	0.97	0.0E+00	5453965	NT	Homo sapiens skeletal muscle LIM-protein 1 (FHL1) gene, complete cds
3490	16095	28569	0.97	0.0E+00	5453965	NT	Homo sapiens death receptor 6 (DR6), mRNA
3493	16098	28573	5.92	0.0E+00	K02380.1	NT	Homo sapiens protein kinase, AMP-activated, alpha 2 catalytic subunit (PRKAA2) mRNA
3495	16100	28575	1.2	0.0E+00	7427522	NT	Homo sapiens protein kinase, AMP-activated, alpha 2 catalytic subunit (PRKAA2) mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3497	16102	28577	1	0.0E+00	4557746	NT	Homo sapiens met proto-oncogene (hepatocyte growth factor receptor) (MET) mRNA
3501	16106	28581	3.89	0.0E+00	A1935159.1	EST_HUMAN	wp14d10.x1 NCI CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2464819 3' similar to TR:O73634 O73634
3501	16106	28582	3.89	0.0E+00	A1935159.1	EST_HUMAN	wp14d10.x1 NCI CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2464819 3' similar to TR:O73634 O73634
3505	16110	28587	2.13	0.0E+00	A1278120.1	NT	Homo sapiens mRNA for putative ankyrin-repeat containing protein (ORF1)
3506	16111	28588	1.12	0.0E+00	7706378	NT	Homo sapiens ASB-4 protein (LOC51696), mRNA
3512	16117	28586	2.09	0.0E+00	6552332	NT	Homo sapiens v-fos FBJ murine osteosarcoma viral oncogene homolog (FOS), mRNA
3512	16117	28587	2.09	0.0E+00	6552332	NT	Homo sapiens v-fos FBJ murine osteosarcoma viral oncogene homolog (FOS), mRNA
3518	16123	28603	1.4	0.0E+00	M14123.1	NT	Human endogenous retrovirus HERV-K10
3523	16128	28608	6.45	0.0E+00	U43293.1	NT	Human MDS1A (AML1/MDS1 fusion) mRNA, partial cds
3528	16133	28612	0.94	0.0E+00	9558718	NT	Homo sapiens hypothetical protein (AF038169), mRNA
3528	16133	28613	0.94	0.0E+00	9558718	NT	Homo sapiens hypothetical protein (AF038169), mRNA
3532	16137	28618	2.45	0.0E+00	AF045452.1	NT	Homo sapiens cell-line KG1 transcriptional regulatory protein p54 mRNA, complete cds
3532	16137	28619	2.45	0.0E+00	AF045452.1	NT	Homo sapiens cell-line KG1 transcriptional regulatory protein p54 mRNA, complete cds
3540	16145	28628	1.19	0.0E+00	AF231922.1	NT	Homo sapiens chromosome 21 unknown mRNA
3547	16151	28631	0.95	0.0E+00	AA626677.1	EST_HUMAN	ab511f12.r1 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:844367 5'
3547	16151	28632	0.95	0.0E+00	AA626677.1	EST_HUMAN	ab511f12.r1 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:844367 5'
3547	16151	28633	0.95	0.0E+00	AA626677.1	EST_HUMAN	ab511f12.r1 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:844367 5'
3553	16157	28639	1.53	0.0E+00	BE304791.1	EST_HUMAN	601143853F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:3051373 5'
3553	16157	28640	1.53	0.0E+00	BE304791.1	EST_HUMAN	601143853F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:3051373 5'
3558	16160	28643	2.51	0.0E+00	4503648	NT	Homo sapiens coagulation factor IX (plasma thromboplastic component, Christmas disease, hemophilia B) (F9) mRNA
3557	16161	28644	1.08	0.0E+00	4826795	NT	Homo sapiens potassium voltage-gated channel, Isk-related family, member 2 (KCNE2) mRNA
3560	16164	28647	1.58	0.0E+00	O14867	SWISSPROT	TRANSCRIPTION REGULATOR PROTEIN BACH1 (BTB AND CNC HOMOLOG 1) (HAZ303)
3565	16169	28651	0.93	0.0E+00	A1984007.1	EST_HUMAN	ta35g12.x1 Soares_NIHMPu_S1 Homo sapiens cDNA clone IMAGE:2088742 3' similar to TR:000498
3568	16172	28654	1.52	0.0E+00	M10976.1	NT	O00498 MYASTHENIA GRAVIS AUTOANTIGEN GRAVIN
3585	16189	28672	0.74	0.0E+00	AA456282.1	EST_HUMAN	Human endogenous retroviral DNA (4-1), complete retroviral segment
3585	16189	28673	0.74	0.0E+00	AA456282.1	EST_HUMAN	z689h04.r1 Soares_NIHMPu_S1 Homo sapiens cDNA clone IMAGE:811927 5'
3594	16198	28681	1	0.0E+00	AV701869.1	EST_HUMAN	z689h04.r1 Soares_NIHMPu_S1 Homo sapiens cDNA clone IMAGE:811927 5'
3595	16199	28682	0.73	0.0E+00	4506884	NT	AV701869 ADB Homo sapiens cDNA clone ADBDAH06 5'
3597	16201	28686	1.47	0.0E+00	AF078888.1	NT	Homo sapiens semogelin II (SEM32) mRNA
3608	16210	28690	1.07	0.0E+00	AL133204.1	NT	Homo sapiens homologous yeast-44.2 protein mRNA, complete cds
							Novel human gene mapping to chromosome X

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3610	16213	28693	0.89	0.0E+00	AB040809.1	NT	Homo sapiens mRNA for KIAA1476 protein, partial cds
3622	16225	28703	1.1	0.0E+00	8923087	NT	Homo sapiens hypothetical protein FLJ20080 (FLJ20080), mRNA
3633	16236	28711	1.16	0.0E+00	6997248	NT	Homo sapiens sal (Drosophila)-like 1 (SALL1), mRNA
3633	16236	28712	1.16	0.0E+00	6997248	NT	Homo sapiens sal (Drosophila)-like 1 (SALL1), mRNA
3634	16237		1.14	0.0E+00	A1081807.1	EST_HUMAN	α77c11.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1682358 3' similar to WP.T1884.4
3636	16239	28715	1.26	0.0E+00	8325463	NT	CE13742
3641	16244		5.41	0.0E+00	AW852217.1	EST_HUMAN	Homo sapiens butyrophilin, subfamily 3, member A3 (BTN3A3), mRNA
3645	16248	28724	1.08	0.0E+00	4504284	NT	QV0-CT0225-230300-169-e01 CT0225 Homo sapiens cDNA
3648	16252		1.74	0.0E+00	AF118846.1	NT	Homo sapiens H3 histone family, member K (H3FK), mRNA
3650	16253	28725	8.35	0.0E+00	BF676393.1	EST_HUMAN	Homo sapiens gamma-glutamylcysteine synthetase (GLCLC) gene, partial cds
3653	16256		0.98	0.0E+00	AA988715.1	EST_HUMAN	602084583F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4246596 5'
3663	16265	28737	0.9	0.0E+00	AW937977.1	EST_HUMAN	α94H08.s1 NC1_CGAP_Kid8 Homo sapiens cDNA clone IMAGE:1594043 3' similar to contains MER29.b2
3675	16276	28743	0.8	0.0E+00	BF672054.1	EST_HUMAN	MER29 repetitive element
3675	16276	28744	0.8	0.0E+00	BF672054.1	EST_HUMAN	QV0-DT0047-170200-123-g01 DT0047 Homo sapiens cDNA
3676	16277		1.3	0.0E+00	4828867	NT	602152486F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4283645 5'
3678	16278	28746	0.98	0.0E+00	AW664693.1	EST_HUMAN	602152486F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4283645 5'
3678	16279	28747	0.98	0.0E+00	AW664693.1	EST_HUMAN	Homo sapiens retinoblastoma-binding protein 2 (RBBP2) mRNA
3682	16283	28751	0.8	0.0E+00	4828763	NT	h184g01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2876024 3'
3684	16285	28754	0.91	0.0E+00		NT	h184g01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2876024 3'
3692	16293	28762	0.72	0.0E+00	7682319	NT	Homo sapiens heparan sulfate (glucosamine) 3-O-sulfotransferase 1 (HS3ST1) mRNA
3692	16293	28763	0.72	0.0E+00	4557752	NT	Homo sapiens KIAA0806 gene product (KIAA0806), mRNA
3708	16310	28777	1.47	0.0E+00	D87327.1	NT	Homo sapiens midline 1 (Opitz/BBB syndrome) (MID1) mRNA
3712	16313		20.4	0.0E+00	7669491	NT	Homo sapiens midline 1 (Opitz/BBB syndrome) (MID1) mRNA
3730	16331	28797	2.49	0.0E+00	AB028542.1	NT	Homo sapiens mRNA for G protein-coupled inward rectifier potassium channel, complete cds
3732	16333	28799	0.93	0.0E+00	AB007866.2	NT	Homo sapiens glyceroldehyde-3-phosphate dehydrogenase (GAPD), mRNA
3734	16335	28800	2.62	0.0E+00	AF124250.1	NT	Homo sapiens WAVE2 mRNA for WASP-family protein, complete cds
3734	16335	28801	2.62	0.0E+00	AF124250.1	NT	Homo sapiens mRNA for KIAA0408 protein, partial cds
3739	16340	28807	2.63	0.0E+00	AA852743.1	EST_HUMAN	Homo sapiens SH2-containing protein Nsp2 mRNA, complete cds
3739	16340	28808	2.63	0.0E+00	AA852743.1	EST_HUMAN	Homo sapiens SH2-containing protein Nsp2 mRNA, complete cds
3743	16344	28811	1.66	0.0E+00	AL163204.2	NT	NHTBCae15g09f1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBCae15g09
							NHTBCae15g09f1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBCae15g09
							Homo sapiens chromosome 21 segment HS21C004

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3743	16344	28812	1.66	0.0E+00	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
3748	16347	28815	1.08	0.0E+00	AW851714.1	EST_HUMAN	MIR2-CT0222-281098-005-e05 CT0222 Homo sapiens cDNA
3748	16349	28817	1.4	0.0E+00	5729928	NT	Homo sapiens matrix metalloproteinase 24 (membrane-inserted) (MMP24), mRNA
3750	16351	28819	1.23	0.0E+00	AB018339.1	NT	Homo sapiens mRNA for KIAA0706 protein, partial cds
3752	16353	28821	1.56	0.0E+00	Q14867	SWISSPROT	TRANSCRIPTION REGULATOR PROTEIN BACH1 (BTB AND CNC HOMOLOG 1) (HA2303)
3754	16355	28823	0.83	0.0E+00	AB020717.1	NT	Homo sapiens mRNA for KIAA0910 protein, partial cds
3754	16355	28824	0.83	0.0E+00	AB020717.1	NT	Homo sapiens mRNA for KIAA0910 protein, partial cds
3767	16368	28833	4.72	0.0E+00	AW288134.1	EST_HUMAN	UI-H-BW0-ajs-e-12-0-JL s1 NCI_CGAP_Sub6 Homo sapiens cDNA clone IMAGE:2733022 3'
3767	16368	28834	4.72	0.0E+00	AW288134.1	EST_HUMAN	UI-H-BW0-ajs-e-12-0-JL s1 NCI_CGAP_Sub6 Homo sapiens cDNA clone IMAGE:2733022 3'
3792	16392	28857	1.06	0.0E+00	AB004630.1	NT	Human gene for Type XIX collagen a1 chain, exon 6
3793	16393	28858	0.87	0.0E+00	AA463659.1	EST_HUMAN	aa06p01.1 Soares_NIH/MPV_S1 Homo sapiens cDNA clone IMAGE:812496 5' similar to SW_KRB4_SHEEP P02445 KERATIN, HIGH-SULFUR MATRIX PROTEIN, IIB4. [1];
3798	16398	28863	1.04	0.0E+00	AB020710.1	NT	Homo sapiens mRNA for KIAA0903 protein, partial cds
3801	16401	28865	4.05	0.0E+00	7657468	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
3810	16409	28874	0.95	0.0E+00	AB037835.1	NT	Homo sapiens mRNA for KIAA1414 protein, partial cds
3823	16423	28885	7.87	0.0E+00	7662183	NT	Homo sapiens KIAA0569 gene product (KIAA0569), mRNA
3826	16426	28888	23.27	0.0E+00	4508718	NT	Homo sapiens ribosomal protein S2 (RPS2) mRNA
3834	16433	28894	1.04	0.0E+00	7657065	NT	Homo sapiens v-ets avian erythroblastosis virus E26 oncogene related (ERG), mRNA
3834	16433	28895	1.04	0.0E+00	7657065	NT	Homo sapiens v-ets avian erythroblastosis virus E26 oncogene related (ERG), mRNA
3873	16471	28935	0.92	0.0E+00	7661867	NT	Homo sapiens KIAA0022 gene product (KIAA0022), mRNA
3873	16471	28936	0.92	0.0E+00	7661867	NT	Homo sapiens KIAA0022 gene product (KIAA0022), mRNA
3892	16491	28951	2.85	0.0E+00	AF178733.1	NT	Pan troglodytes olfactory receptor (PTR208) gene, partial cds
3896	16495	28956	1.55	0.0E+00	7657468	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
3898	16495	28957	1.55	0.0E+00	7657468	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
3900	16499	28962	1.35	0.0E+00	A1377699.1	EST_HUMAN	te62f10.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2091307 3'
3901	16500		1.09	0.0E+00	AF152496.1	NT	Homo sapiens protocadherin beta 3 (PCDH-beta3) mRNA, complete cds
3902	16501	28963	2.32	0.0E+00	4758199	NT	Homo sapiens desmoplakin (DPI, DP1) (DSP) mRNA
3905	16504	28966	10.94	0.0E+00	S78685.1	NT	Homo sapiens ATP-sensitive inwardly rectifying K-channel subunit (KCNJ6/BIR1) gene, complete cds
3906	16505	28967	2.15	0.0E+00	7710148	NT	Homo sapiens methyl CpG binding protein 2 (MECP2), mRNA
3907	16506	28968	2.69	0.0E+00	7662183	NT	Homo sapiens KIAA0569 gene product (KIAA0569), mRNA
3910	16509	28970	1.1	0.0E+00	AF068601.2	NT	Homo sapiens myosin light chain kinase isoform 2 (MLCK) mRNA, complete cds
3910	16509	28971	1.1	0.0E+00	AF068601.2	NT	Homo sapiens myosin light chain kinase isoform 2 (MLCK) mRNA, complete cds
3916	16514	28977	0.84	0.0E+00	6912735	NT	Homo sapiens transient receptor potential channel 5 (TRPC5), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3921	16519	28985	6.15	0.0E+00	4503178	NT	Homo sapiens chromosome X open reading frame 5 (CXORF5) mRNA
3921	16519	28988	6.15	0.0E+00	4503178	NT	Homo sapiens chromosome X open reading frame 5 (CXORF5) mRNA
3923	16521	28989	4.15	0.0E+00	U09412.1	NT	Human zinc finger protein ZNF134 mRNA, complete cds
3924	16522	28990	32.21	0.0E+00	AF114488.1	NT	Homo sapiens intersectin short isoform (ITSN) mRNA, complete cds
3927	16525	28992	1.46	0.0E+00	4828783	NT	Homo sapiens potassium voltage-gated channel, Shab-related subfamily, member 1 (KCNB1) mRNA
3930	16528	28995	1.1	0.0E+00	AF012615.1	NT	Homo sapiens familial mental retardation protein 2 (FMR2) gene, exon 11
3931	16529	28996	1.93	0.0E+00	4759171	NT	Homo sapiens SC35-interacting protein 1 (SRRP129) mRNA
3933	16531	28998	1.09	0.0E+00	AF099117.1	NT	Homo sapiens amphiphysin gene, partial cds
3944	16542	29009	2.45	0.0E+00	AI864727.1	EST_HUMAN	wk0101.x1 NCL CGAP_Lym12 Homo sapiens cDNA clone IMAGE:2411085 3' similar to TR:O43340
3947	16545	29013	16.56	0.0E+00	4506742	NT	Homo sapiens ribosomal protein S8 (RPS8) mRNA
3952	16550	29019	1.8	0.0E+00	AL040338.1	EST_HUMAN	DKFZp434N0413.1_1 434 (synonym: hess3) Homo sapiens cDNA clone DKFZp434N0413.5
3957	16555	29025	1.03	0.0E+00	6005887	NT	Homo sapiens AP1 gamma subunit binding protein 1 (AP1GBP1) mRNA
3958	16556	29026	1.03	0.0E+00	6005887	NT	Homo sapiens AP1 gamma subunit binding protein 1 (AP1GBP1) mRNA
3958	16556	29027	2.86	0.0E+00	4504138	NT	Homo sapiens glutamate receptor, metabotropic 3 (GRM3) mRNA
3960	16558	29028	2.2	0.0E+00	4505078	NT	Homo sapiens melanoma antigen, family B, 1 (MAGEB1) mRNA
3964	16562	29031	1.02	0.0E+00	AF149412.1	NT	Homo sapiens HBP17 heparin-binding and FGF-binding protein gene, complete cds
3975	16573	29043	1.92	0.0E+00	4508758	NT	Homo sapiens ryanodine receptor 3 (RYR3) mRNA
3979	16577	29047	1.81	0.0E+00	4585642	NT	Homo sapiens zinc finger protein (KIAA0412) mRNA
3988	16586	29057	1.88	0.0E+00	BF355295.1	EST_HUMAN	RC3-HT0860-170800-011-a12 HT0860 Homo sapiens cDNA
3990	16588	29059	1.04	0.0E+00	AW888221.1	EST_HUMAN	MXRA5 Human matrix tissue expression library Homo sapiens cDNA clone Incyte 1996728 similar to MXRA5
3990	16588	29060	1.04	0.0E+00	AW888221.1	EST_HUMAN	MXRA5 Human matrix tissue expression library Homo sapiens cDNA clone Incyte 1996728 similar to MXRA5
3998	16596	29068	2.64	0.0E+00	AF129533.1	NT	Matrix remodeling associated gene 5
4001	16599	29071	1.06	0.0E+00	U86281.1	NT	Homo sapiens F-box protein Fbl3b (FBL3B) mRNA, partial cds
4001	16599	29072	1.06	0.0E+00	U86281.1	NT	Homo sapiens olfactory receptor (OR7-141) gene, partial cds
4006	16604	29078	4.1	0.0E+00	BE378602.1	EST_HUMAN	Homo sapiens olfactory receptor (OR7-141) gene, partial cds
4014	16612	29085	1.28	0.0E+00	AW580740.1	EST_HUMAN	601236866F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3608800 5'
4047	16644	29110	13.52	0.0E+00	AF116195.1	NT	PM3-L T0031-100100-003-H09 L T0031 Homo sapiens cDNA
4047	16644	29111	13.52	0.0E+00	AF116195.1	NT	Homo sapiens cancer-testis antigen CT10 (CT10) gene, complete cds
4057	16654		4.5	0.0E+00	M23910.1	NT	Homo sapiens cancer-testis antigen CT10 (CT10) gene, complete cds
4059	16656		6.04	0.0E+00	AL163303.2	NT	Human MHC class II lymphocyte antigen DPw4-beta-2 pseudogene, exon 2
							Homo sapiens chromosome 21 segment HS21C103

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4065	16662	29124	1.23	0.0E+00	AL118494.1	NT	Novel human gene mapping to chromosome 20
4069	16665	29126	3.49	0.0E+00	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
4077	16673	29134	2.12	0.0E+00	AL163288.2	NT	Homo sapiens chromosome 21 segment HS21C068
4080	16686		60.86	0.0E+00	4503470	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
4096	16693	29150	1.89	0.0E+00	U09366.1	NT	Human zinc finger protein ZNF133
4120	16713	29189	10.72	0.0E+00	AB015610.1	NT	Chlorococcus ethiops mRNA for ribosomal protein S4X, complete cds
4130	16722		3.27	0.0E+00	AJ238617.1	NT	Homo sapiens mRNA for UGA suppressor RNA-associated antigenic protein (RNA48 gene)
4140	16732	29185	1.61	0.0E+00	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
4141	16733	29186	2.96	0.0E+00	AJ277276.1	NT	Homo sapiens mRNA for rapa-2 (rapa gene)
4141	16733	29187	2.96	0.0E+00	AJ277276.1	NT	Homo sapiens mRNA for rapa-2 (rapa gene)
4148	16740	29193	8.52	0.0E+00	5032026	NT	Homo sapiens retinoblastoma-binding protein 4 (RBBP4) mRNA
4148	16740	29194	8.52	0.0E+00	5032026	NT	Homo sapiens retinoblastoma-binding protein 4 (RBBP4) mRNA
4158	16750	29203	0.98	0.0E+00	4503914	NT	Homo sapiens phosphoribosylglycinamide formyltransferase, phosphoribosylglycinamide synthetase,
4164	16755	29207	7.55	0.0E+00	4885306	NT	phosphoribosylglycinamide synthetase (GART) mRNA
4165	16756	29208	4.94	0.0E+00	AB006625.1	NT	Homo sapiens mRNA for KIAA0287 gene, partial cds
4168	16759	29209	0.66	0.0E+00	4768807	NT	Homo sapiens ras GTPase activating protein-like (NGAP) mRNA
4169	16760	29210	6.82	0.0E+00	11419297	NT	Homo sapiens IMP (inosine monophosphate) dehydrogenase 1 (IMPDH1), mRNA
4170	16761	29211	2.88	0.0E+00	AL098857.1	NT	Novel human mRNA from chromosome 1, which has similarities to BAT2 genes
4171	16762		1.11	0.0E+00	AA018975.1	EST_HUMAN	ze55a09.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:362920 5' similar to contains Alu
4178	16769	29218	3.61	0.0E+00	AF165527.1	NT	repetitive element
4189	13773	26282	0.76	0.0E+00	4826947	NT	Homo sapiens DGCR8 (DGCR8) mRNA, complete cds
4189	13773	26283	0.76	0.0E+00	4826947	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
4195	16785	29233	2.14	0.0E+00	5901905	NT	Homo sapiens protein kinase, X-linked (PRKX) mRNA
4196	16786	29234	1.21	0.0E+00	4503854	NT	Homo sapiens butyrophilin, subfamily 3, member A2 (BTN3A2), mRNA
4196	16786	29235	1.21	0.0E+00	4503854	NT	Homo sapiens GA-binding protein transcription factor, alpha subunit (60kD) (GABPA), mRNA
4198	16789	28682	0.57	0.0E+00	4506884	NT	Homo sapiens GA-binding protein transcription factor, alpha subunit (60kD) (GABPA), mRNA
4200	16789	29237	1.35	0.0E+00	8922391	NT	Homo sapiens semenogelin II (SEMG2) mRNA
4200	16789	29238	1.35	0.0E+00	8922391	NT	Homo sapiens hypothetical protein FLJ10379 (FLJ10379), mRNA
4206	16795	29242	0.59	0.0E+00	AB020702.1	NT	Homo sapiens hypothetical protein FLJ10379 (FLJ10379), mRNA
4213	16802	29251	18.39	0.0E+00	A1982597.1	EST_HUMAN	Homo sapiens mRNA for KIAA0895 protein, partial cds
4213	16802	29252	18.39	0.0E+00	A1982597.1	EST_HUMAN	wu04404.x1 NCI CGAP GC8 Homo sapiens cDNA clone IMAGE:2515975 3'
4216	16804	29254	1.08	0.0E+00	BE184856.1	EST_HUMAN	wu04404.x1 NCI CGAP GC8 Homo sapiens cDNA clone IMAGE:2515975 3'



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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4216	16804	29255	1.08	0.0E+00	BE184856.1	EST_HUMAN	MIR1-HIT0707-100500-001-a02 HT0707 Homo sapiens cDNA
4221	16809		3.97	0.0E+00	BE274217.1	EST_HUMAN	601120778F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2887680 5'
4227	16815	29262	1.12	0.0E+00	AB032951.1	NT	Homo sapiens mRNA for KIAA1125 protein, partial cds
4227	16815	29263	1.12	0.0E+00	AB032951.1	NT	Homo sapiens mRNA for KIAA1125 protein, partial cds
4228	16817	29265	2.51	0.0E+00	5729725	NT	Homo sapiens nuclear receptor coactivator 3 (NCOA3), mRNA
4236	16824		5.9	0.0E+00	AW875599.1	EST_HUMAN	ba51f04.x1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:2900095 3' similar to SW:TH12_BOVIN
4241	16829	29279	1.14	0.0E+00	AW408788.1	EST_HUMAN	Q95108 MITOCHONDRIAL THIOREDOXIN PRECURSOR ;
4242	16830	29280	1.64	0.0E+00	8622468	NT	UI-HF-BMD-adj-c-02-0-J1r1 NIH_MGC_38 Homo sapiens cDNA clone IMAGE:3063147 5'
4242	16830	29281	1.64	0.0E+00	8922468	NT	Homo sapiens hypothetical protein FLJ10498 (FLJ10498), mRNA
4251	16839		2.08	0.0E+00	5174632	NT	Homo sapiens hypothetical protein FLJ10498 (FLJ10498), mRNA
4263	16849	29297	1.06	0.0E+00	AB037739.1	NT	Homo sapiens polycystic kidney disease (polycystin) and REJ (sperm receptor for egg jelly, sea urchin homolog)-like (PKDREJ) mRNA
4270	16856	29303	10.06	0.0E+00	AA401438.1	EST_HUMAN	Homo sapiens mRNA for KIAA1318 protein, partial cds
4270	16856	29304	10.06	0.0E+00	AA401438.1	EST_HUMAN	zu68h07.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:743197 3' similar to contains Alu repetitive element/contains element MER35 repetitive element ;
4273	16859	29308	1.01	0.0E+00	AF157476.1	NT	zu68h07.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:743197 3' similar to contains Alu repetitive element/contains element MER35 repetitive element ;
4286	16872	29319	1.02	0.0E+00	4507720	NT	Homo sapiens DNA polymerase zeta catalytic subunit (REV3) mRNA, complete cds
4286	16872	29320	1.02	0.0E+00	4507720	NT	Homo sapiens binn (TTN) mRNA
4301	16887	29331	1.09	0.0E+00	7681869	NT	Homo sapiens binn (TTN) mRNA
4305	16891	29333	1.6	0.0E+00	4758189	NT	Homo sapiens KIAA0173 gene product (KIAA0173), mRNA
4305	16891	29334	1.6	0.0E+00	4758189	NT	Homo sapiens desmoplakin (DPI, DPII) (DSP) mRNA
4314	16900		0.72	0.0E+00	AL163303.2	NT	Homo sapiens desmoplakin (DPI, DPII) (DSP) mRNA
4344	16931	29372	1.17	0.0E+00	AJ003145.1	NT	Homo sapiens chromosome 21 segment HS21C103
4346	16933	29374	0.96	0.0E+00	AJ003145.1	NT	Homo sapiens mRNA for olfactory receptor protein, pseudogene
4360	16947	29389	17.92	0.0E+00	AJ010770.1	NT	Homo sapiens hyperion gene, exons 1-50
4375	16962	29406	0.84	0.0E+00	AW936689.1	EST_HUMAN	Human apolipoprotein B-100 mRNA, complete cds
4381	16968	29415	0.59	0.0E+00	4828827	NT	PM2-DT0023-080300-004-g08 DT0023 Homo sapiens cDNA
4381	16968	29416	0.59	0.0E+00	4828827	NT	Homo sapiens myelodysplasia syndrome 1 (MDS1) mRNA
4383	16970	29418	4.39	0.0E+00	AF174590.1	NT	Homo sapiens myelodysplasia syndrome 1 (MDS1) mRNA
4391	16977		2.19	0.0E+00	AI189844.1	EST_HUMAN	Homo sapiens F-box protein Fbl4 (FBL4) mRNA, partial cds
4395	16980		4.49	0.0E+00	U14520.1	NT	qd23f06.x1 Soares_placenta_8w0weeks_2NbhP8tc9W Homo sapiens cDNA clone IMAGE:1724578 3' similar to contains MER20.b2 MER20 repetitive element ;
							Human CBFA3 (Cbfa3) gene, partial cds

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4399	16984	29429	0.84	0.0E+00	5174574	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (t(11q24) homodog); translocated to, 4 (MLLT4) mRNA
4418	17003	29446	0.9	0.0E+00	6563384	NT	Homo sapiens protein kinase C, nu (PRKGN), mRNA
4418	17003	29447	0.9	0.0E+00	6563384	NT	Homo sapiens protein kinase C, nu (PRKGN), mRNA
4425	17010	29453	1.16	0.0E+00	U10991.1	NT	Human G2 protein mRNA, partial cds
4425	17010	29454	1.16	0.0E+00	U10991.1	NT	Human G2 protein mRNA, partial cds
4433	17019	29459	11.1	0.0E+00	6912281	NT	Homo sapiens COMPLEMENT COMPONENT C1q RECEPTOR (C1QR), mRNA
4451	17037		1.13	0.0E+00	AF153047.2	NT	Homo sapiens gap junction protein connexin-36 (CX36) gene, complete cds
4460	17046	29489	4.6	0.0E+00	L14561.1	NT	Homo sapiens plasma membrane calcium ATPase isoform 1 (ATP2B1) gene, alternative splice products, partial cds
4464	17050	29494	5.78	0.0E+00	Z80780.1	NT	H. sapiens H2B/h gene
4464	17050	29495	5.78	0.0E+00	Z80780.1	NT	H. sapiens H2B/h gene
4470	17056	29501	1.97	0.0E+00	X60483.1	NT	H. sapiens H4/d gene for H4 histone
4470	17056	29502	1.97	0.0E+00	X60483.1	NT	H. sapiens H4/d gene for H4 histone
4475	17060	29508	10.17	0.0E+00	7662091	NT	Homo sapiens KIAA0390 gene product (KIAA0390), mRNA
4475	17060	29509	10.17	0.0E+00	7662091	NT	Homo sapiens KIAA0390 gene product (KIAA0390), mRNA
4484	17069	29519	1.11	0.0E+00	X82338.1	NT	Homo sapiens Menkes disease gene, exon 4
4487	17072	29523	16.07	0.0E+00	4885126	NT	Homo sapiens caudal type homeo box transcription factor 4 (CDX4), mRNA
4488	17073	29524	1.73	0.0E+00	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region, segment 2/2
4491	17076	29526	1.14	0.0E+00	AB037781.1	NT	Homo sapiens mRNA for KIAA1360 protein, partial cds
4526	17110	29554	1.43	0.0E+00	7018456	NT	Homo sapiens myosin regulatory light chain interacting protein (MIR), mRNA
4537	17121		7.31	0.0E+00	AF195953.1	NT	Homo sapiens membrane-bound aminopeptidase P (XNPEP2) gene, complete cds
4545	17129	29572	1.27	0.0E+00	AJ249785.1	NT	Homo sapiens ACTN2 gene for alpha-Actinin 2, exon 10
4545	17129	29573	1.27	0.0E+00	AJ249785.1	NT	Homo sapiens ACTN2 gene for alpha-Actinin 2, exon 10
4549	17132	29579	0.58	0.0E+00	W26179.1	EST_HUMAN	24g7 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
4549	17132	29580	0.58	0.0E+00	W26179.1	EST_HUMAN	24g7 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
4555	17138	29585	6.07	0.0E+00	4506792	NT	Homo sapiens spinocerebellar ataxia 1 (clivopontocerebellar ataxia 1, autosomal dominant, ataxin 1) (SCA1), mRNA
4555	17138	29586	6.07	0.0E+00	4506792	NT	Homo sapiens spinocerebellar ataxia 1 (clivopontocerebellar ataxia 1, autosomal dominant, ataxin 1) (SCA1), mRNA
4567	17150		2.3	0.0E+00	AF200629.1	NT	Homo sapiens HPS1 gene, intron 5
4585	17168	29611	0.59	0.0E+00	T10233.1	EST_HUMAN	seq1329 b4HB3MA Cor8-HAP-Ft Homo sapiens cDNA clone b4HB3MA-COT8-HAP-F205 5'
4585	17168	29612	0.59	0.0E+00	T10233.1	EST_HUMAN	seq1329 b4HB3MA Cor8-HAP-Ft Homo sapiens cDNA clone b4HB3MA-COT8-HAP-F205 5'
4588	17171		0.65	0.0E+00	M14123.1	NT	Human endogenous retrovirus HERV-K10

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4589	17172	29816	1.48	0.0E+00	AA228126.1	EST_HUMAN	z58c04.t1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:687590 5' similar to TR:G2222811
4589	17172	29817	1.48	0.0E+00	AA228126.1	EST_HUMAN	G2222811 ALPHA 1 CHAIN OF TYPE XII COLLAGEN ;
4589	17183	29830	6.46	0.0E+00	AW084984.1	EST_HUMAN	z58c04.t1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:687590 5' similar to TR:G2222811
4601	18007		2.1	0.0E+00	8051819	NT	G2222811 ALPHA 1 CHAIN OF TYPE XII COLLAGEN ;
4603	17186	29833	0.92	0.0E+00	AI696698.1	EST_HUMAN	xc68e08.x1 NCL_CGAP_Eso2 Homo sapiens cDNA clone IMAGE:2589446 3' similar to SW:AHNK_HUMAN
4607	17190		8.58	0.0E+00	AL163207.2	NT	Q09696 NEUROBLAST DIFFERENTIATION ASSOCIATED PROTEIN AHNAK ;
4609	17192	29838	2.41	0.0E+00	AW381570.1	EST_HUMAN	Homo sapiens LIM domain kinase 2 (LIMK2), transcript variant 2a, mRNA
4615	17198	29845	1.43	0.0E+00	AJ278120.1	NT	wc56b02.x1 NCL_CGAP_P128 Homo sapiens cDNA clone IMAGE:2322603 3' similar to contains MER22.b2
4615	17198	29846	1.43	0.0E+00	AJ278120.1	NT	PTR5 repetitive element ;
4617	17200	29848	2.01	0.0E+00	4759467	NT	Homo sapiens chromosome 21 segment HS21C007
4618	17201	29849	3.29	0.0E+00	AF108830.1	NT	PM1-HT0305-101196-002-d03 HT0305 Homo sapiens cDNA
4623	17206	29855	1.19	0.0E+00	4506952	NT	Homo sapiens mRNA for putative ankyrin-repeat containing protein (ORF1)
4628	17211	29861	1.16	0.0E+00	AF111163.1	NT	Homo sapiens mRNA for putative ankyrin-repeat containing protein (ORF1)
4628	17211	29862	1.16	0.0E+00	AF111163.1	NT	Homo sapiens G protein-coupled receptor 50 (GPR50) mRNA
4637	18008	29873	2.92	0.0E+00	6005973	NT	Homo sapiens serine-threonine protein kinase (MNBH) mRNA, complete cds
4642	17224	29878	4.04	0.0E+00	AF208161.1	NT	Homo sapiens sialyltransferase 6 (alpha-N-acetylneuraminase: alpha-2,8-sialyltransferase, GD3 synthase)
4647	17229	29885	1.86	0.0E+00	AF152337.1	NT	(SIAT6) mRNA
4650	17232	29889	1.5	0.0E+00	5454175	NT	Homo sapiens pyrin (MEFV) gene, complete cds
4662	17244	29898	32.6	0.0E+00	4503470	NT	Homo sapiens pyrin (MEFV) gene, complete cds
4671	17253	29705	0.79	0.0E+00	4505016	NT	Homo sapiens zinc finger protein 195 (ZNF195), mRNA
4675	17257	29708	1.02	0.0E+00	4503098	NT	Homo sapiens syncytin precursor, mRNA, complete cds
4679	17261	29713	1.14	0.0E+00	4502556	NT	Homo sapiens probocadherin gamma C3 (PCDH-gamma-C3) mRNA, complete cds
4684	17266		3.03	0.0E+00	L35485.1	NT	Homo sapiens zinc finger protein 211 (ZNF211), mRNA
4686	17268	29716	9.75	0.0E+00	7662091	NT	Homo sapiens eukaryotic translation elongation factor 1 alpha 1 (EEF1A1) mRNA
4686	17268	29717	9.75	0.0E+00	7662091	NT	Homo sapiens low density lipoprotein receptor-related protein 6 (LRP6) mRNA, and translated products
4707	17289	29733	3.17	0.0E+00	AF143314.1	NT	Homo sapiens chondroitin sulfate proteoglycan 4 (melanoma-associated) (CSPG4), mRNA
4710	17292	29736	11.37	0.0E+00	AJ245418.1	NT	Homo sapiens calcium/calmodulin-dependent protein kinase IV (CAMK4) mRNA

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Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4710	17292	29737	11.37	0.0E+00	AJ245418.1	NT	Homo sapiens mRNA for G7c protein (G7c gene located in the class III region of the major histocompatibility complex)
4712	17294	29738	0.64	0.0E+00	AB018338.1	NT	Homo sapiens mRNA for KIAA0795 protein, partial cds
4718	17299		0.65	0.0E+00	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
4730	17311		1.68	0.0E+00	AA174072.1	EST_HUMAN	zp18g08.s1 Stratagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:608854 3'
4732	17313		1.97	0.0E+00	7657410	NT	Homo sapiens cdz (odd Ozlen-m, Drosophila) homolog 1 (ODZ1), mRNA
4734	17315		2.45	0.0E+00	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
4735	17316	29758	1.69	0.0E+00	AF184110.1	NT	Homo sapiens cyclophilin-related protein (NKTR) gene, complete cds
4736	17317	29759	5.45	0.0E+00	AL163300.2	NT	Homo sapiens chromosome 21 segment HS21C100
4737	17318		1.94	0.0E+00	AB037521.1	NT	Homo sapiens gene for natriuretic protein, partial cds
4739	17320	29760	0.62	0.0E+00	AF195658.1	NT	Homo sapiens DNA mismatch repair protein (MLH3) gene, complete cds
4747	17328	29770	8.77	0.0E+00	4557887	NT	Homo sapiens keratin 18 (KRT18) mRNA
4747	17328	29771	8.77	0.0E+00	4557887	NT	Homo sapiens keratin 18 (KRT18) mRNA
4748	17329	29772	1.57	0.0E+00	AF167441.1	NT	Mus musculus E-cadherin binding protein E7 mRNA, complete cds
4757	17338	29783	1.13	0.0E+00	AB028970.1	NT	Homo sapiens mRNA for KIAA1047 protein, partial cds
4757	17338	29784	1.13	0.0E+00	AB028970.1	NT	Homo sapiens mRNA for KIAA1047 protein, partial cds
4763	17344	29792	12.17	0.0E+00	Y18890.1	NT	Human endogenous retrovirus type K (HERV-K), gag, pol and env genes
4772	17353	29805	1.21	0.0E+00	BE081527.1	EST_HUMAN	QV2-BT0635-180400-142-H05 BT0635 Homo sapiens cDNA
4773	17354	29806	1.04	0.0E+00	AA418246.1	EST_HUMAN	zv96b07.s1 Soares_NhIMPu_S1 Homo sapiens cDNA clone IMAGE:767605 3'
4779	17360		2.04	0.0E+00	AF089641.1	NT	Homo sapiens truncated tenascin XB (TNXB) gene, partial cds and TNXA gene recombination breakpoint region
4785	17365	29816	1.09	0.0E+00	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
4785	17365	29817	1.09	0.0E+00	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
4786	17366	29818	2.54	0.0E+00	AB037820.1	NT	Homo sapiens mRNA for KIAA1399 protein, partial cds
4786	17366	29819	2.54	0.0E+00	AB037820.1	NT	Homo sapiens mRNA for KIAA1399 protein, partial cds
4787	17367	29820	2.04	0.0E+00	M74098.1	NT	Human displacement protein (CCAAT) mRNA
4792	17371	29824	2	0.0E+00	6453812	NT	Homo sapiens butyrophilin, subfamily 2, member A2 (BTN2A2), mRNA
4792	17371	29825	2	0.0E+00	6453812	NT	Homo sapiens butyrophilin, subfamily 2, member A2 (BTN2A2), mRNA
4794	12809	25297	1.8	0.0E+00	T56945.1	EST_HUMAN	ya83g04.12 Stratagene fetal spleen (#937205) Homo sapiens cDNA clone IMAGE:68310 5'
4794	12809	25298	1.8	0.0E+00	T56945.1	EST_HUMAN	ya83g04.12 Stratagene fetal spleen (#937205) Homo sapiens cDNA clone IMAGE:68310 5'
4797	17375		1.1	0.0E+00	BE278730.1	EST_HUMAN	601158935F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3505521 5'
4803	17381	29831	0.64	0.0E+00	BE390050.1	EST_HUMAN	601285246F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3607087 5'
4818	17396	29849	0.93	0.0E+00	5729817	NT	Homo sapiens ecotropic viral integration site 2B (EVI2B), mRNA
4818	17396	29850	0.93	0.0E+00	5729817	NT	Homo sapiens ecotropic viral integration site 2B (EVI2B), mRNA

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4819	17397	29851	1.01	0.0E+00	U56651.1	NT	Mus musculus neurosophilin 1 (Nupht) gene, large exon and 3' end of the intron, and partial cds
4823	17401	29854	5.32	0.0E+00	M80902.1	NT	Human AHNK nucleoprotein mRNA, 5' end
4826	17404	29857	133.49	0.0E+00	M69197.1	NT	Human heptoglobin and heptoglobin-related protein (HP and HPR) genes, complete cds
4828	17404	29858	133.49	0.0E+00	M69197.1	NT	Human heptoglobin and heptoglobin-related protein (HP and HPR) genes, complete cds
4829	17407	29861	1.32	0.0E+00	AF184110.1	NT	Homo sapiens cyclophilin-related protein (NKTR) gene, complete cds
4832	17410	29863	1.28	0.0E+00	7682181	NT	Homo sapiens KIAA0563 gene product (KIAA0563), mRNA
4851	17429		1.08	0.0E+00	X58467.1	NT	Human GYP2D7AP pseudogene for cytochrome P450 2D6
4861	17439	29868	0.83	0.0E+00	7304922	NT	Homo sapiens bromodomain adjacent to zinc finger domain, 2B (BAZ2B), mRNA
4861	17439	29869	0.83	0.0E+00	7304922	NT	Homo sapiens bromodomain adjacent to zinc finger domain, 2B (BAZ2B), mRNA
4873	17448	29899	1.3	0.0E+00	AF028801.1	NT	Homo sapiens alpha-3 type IX collagen (COL9A3) gene, promoter region, and exons 1-28
4876	17451	29902	0.91	0.0E+00	6677700	NT	Homo sapiens G-protein coupled receptor (RE2), mRNA
4876	17451	29903	0.91	0.0E+00	6677700	NT	Homo sapiens G-protein coupled receptor (RE2), mRNA
4878	17454	29906	0.83	0.0E+00	7019320	NT	Homo sapiens protein x0008 (AD013), mRNA
4878	17454	29907	0.83	0.0E+00	7019320	NT	Homo sapiens protein x0008 (AD013), mRNA
4900	17475	29931	1.61	0.0E+00	AW444637.1	EST_HUMAN	UI-H-B13-ajw-c04-Q-U1.s1 NCI_CGAP Sub5 Homo sapiens cDNA clone IMAGE:2733284 3'
4907	17482	29940	1.36	0.0E+00	AF303134.1	NT	Homo sapiens aldehyde dehydrogenase 12 (ALDH12) mRNA, complete cds
4910	17485		1.51	0.0E+00	AF083242.1	NT	Homo sapiens HSPC024-iso mRNA, complete cds
4923	17498		0.59	0.0E+00	AW339253.1	EST_HUMAN	x289406.x1 NCI_CGAP_Ly24 Homo sapiens cDNA clone IMAGE:2871371 3'
4968	17542		3.61	0.0E+00	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
4971	17545	29987	1.76	0.0E+00	X87205.1	NT	M.fascicularis mRNA for metalloproteinase-like, disintegrin-like protein, IVa
4973	17547	29989	1.19	0.0E+00	AF084476.1	NT	Homo sapiens Williams-Beuren syndrome deletion transcript 9 (WBSCR9) mRNA, complete cds
4974	17548	29990	1.36	0.0E+00	AF097416.1	NT	Mus musculus zinc finger transcription factor Kaiso mRNA, complete cds
4975	17549	29991	4.69	0.0E+00	4503766	NT	Homo sapiens fragile X mental retardation 2 (FMR2) mRNA
4977	17551	29993	12.25	0.0E+00	4885048	NT	Homo sapiens actin, alpha, cardiac muscle (ACTC), mRNA
4978	17552	29994	1.19	0.0E+00	P52740	SWISSPROT	ZINC FINGER PROTEIN 132
4980	17554	29996	1.7	0.0E+00	8922180	NT	Homo sapiens hypothetical protein DKFZp762E1312 (DKFZp762E1312), mRNA
4983	17557	30000	5.09	0.0E+00	8923080	NT	Homo sapiens hypothetical protein FLJ20073 (FLJ20073), mRNA
4987	17561	30004	1.8	0.0E+00	M94081.1	NT	Human Tcr-C-delta gene, exons 1-4; Tcr-V-delta gene, exons 1-2; T-cell receptor alpha (Tcr-alpha) gene, J1-J61 segments; and Tcr-C-alpha gene, exons 1-4
4987	17561	30005	1.8	0.0E+00	M94081.1	NT	Human Tcr-C-delta gene, exons 1-4; Tcr-V-delta gene, exons 1-2; T-cell receptor alpha (Tcr-alpha) gene, J1-J61 segments; and Tcr-C-alpha gene, exons 1-4
4989	17563	30007	1.78	0.0E+00	X94628.1	NT	H. sapiens MeCP-2 gene
4989	17563	30008	1.78	0.0E+00	X94628.1	NT	H. sapiens MeCP-2 gene

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4992	17566	30011	2.79	0.0E+00	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
4994	17568	30012	0.98	0.0E+00	7706804	NT	Homo sapiens MAGE-C2 (MAGEC2), mRNA
5005	17578	30022	0.95	0.0E+00	5032150	NT	Homo sapiens TATA box binding protein (TBP)-associated factor, RNA polymerase II, 28kD (TAF2)
5015	17589	30032	1.75	0.0E+00	4585642	NT	Homo sapiens zinc finger protein (KIAA0412) mRNA
5016	17590	30033	0.64	0.0E+00	AB037864.1	NT	Homo sapiens mRNA for KIAA1443 protein, partial cds
5017	17591	30034	1.32	0.0E+00	AB014533.1	NT	Homo sapiens mRNA for KIAA0633 protein, partial cds
5018	17592	30035	2.53	0.0E+00	6677648	NT	Mus musculus zinc finger protein interacting with K protein 1 (Zik1), mRNA
5019	17593	30036	2.01	0.0E+00	5174560	NT	Homo sapiens meningioma expressed antigen 6 (coiled-coil proline-rich) (MGEA6), mRNA
5021	17596	30038	2.81	0.0E+00	4758199	NT	Homo sapiens desmoplakin (DPI, DPII) (DSP) mRNA
5023	17597	30040	0.98	0.0E+00	Y16723.1	NT	Homo sapiens gene encoding filensin, exon 8
5024	17598	30041	1.26	0.0E+00	5174560	NT	Homo sapiens meningioma expressed antigen 6 (coiled-coil proline-rich) (MGEA6), mRNA
5024	17598	30042	1.26	0.0E+00	5174560	NT	Homo sapiens meningioma expressed antigen 6 (coiled-coil proline-rich) (MGEA6), mRNA
5026	17600	30045	16.3	0.0E+00	AF055066.1	NT	Homo sapiens MHC class 1 region
5028	17602		2.87	0.0E+00	4505508	NT	Homo sapiens opicid receptor, delta 1 (OPRD1) mRNA
5029	17603	30048	3.33	0.0E+00	AF091711.1	NT	Homo sapiens splice variant AKAP350 mRNA, partial cds
5041	17614	30058	2.27	0.0E+00	4503884	NT	Homo sapiens farnesyl diphosphate synthase (farnesyl pyrophosphate synthetase, dimethylallyltransferase, geranyltransferase) (FDPs) mRNA
5043	17616	30060	3.9	0.0E+00	4557472	NT	Homo sapiens chloride channel 5 (nephrolithiasis 2, X-linked, Dent disease) (CLCN5) mRNA
5043	17616	30061	3.9	0.0E+00	4557472	NT	Homo sapiens chloride channel 5 (nephrolithiasis 2, X-linked, Dent disease) (CLCN5) mRNA
5058	17631		0.59	0.0E+00	AI291129.1	EST_HUMAN	qm1505.x1 NCL CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1881921 3' similar to TR:Q61632 Q61632
5061	17634	30076	2.85	0.0E+00	AB006625.1	NT	EN-2/JAC2 FUSION PROTEIN
5061	17634	30077	2.85	0.0E+00	AB006625.1	NT	Homo sapiens mRNA for KIAA0287 gene, partial cds
5072	17645	30087	0.92	0.0E+00	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
5088	17661	30101	1.38	0.0E+00	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
5093	17666	30105	0.57	0.0E+00	7662319	NT	Homo sapiens KIAA0808 gene product (KIAA0808), mRNA
5103	17675	30115	2.12	0.0E+00	4502398	NT	Homo sapiens beaded filament structural protein 1, filensin (BFSP1) mRNA
5108	17680		7.33	0.0E+00	U14967.1	NT	Human ribosomal protein L21 mRNA, complete cds
5118	17690	30128	1.25	0.0E+00	M10976.1	NT	Human endogenous retroviral DNA (4-1), complete retroviral segment
5121	17693		2.86	0.0E+00	BE408963.1	EST_HUMAN	601303729F-1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3638118 5'
5124	17696	30133	3.82	0.0E+00	4758199	NT	Homo sapiens desmoplakin (DPI, DPII) (DSP) mRNA
5135	17707	30139	1.19	0.0E+00	AB028966.1	NT	Homo sapiens mRNA for KIAA1043 protein, partial cds

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5152	17722	30152	1.89	0.0E+00	8923441	NT	Homo sapiens hypothetical protein FLJ20477 (FLJ20477), mRNA
5152	17722	30153	1.89	0.0E+00	8923441	NT	Homo sapiens hypothetical protein FLJ20477 (FLJ20477), mRNA
5170	17738	30185	1.07	0.0E+00	AA601246.1	EST_HUMAN	no14g09.s1 NCL_CGAP_Phe1 Homo sapiens cDNA clone IMAGE:1100704 3' similar to TR.E239140
5170	17738	30186	1.07	0.0E+00	AA601246.1	EST_HUMAN	no14g09.s1 NCL_CGAP_Phe1 Homo sapiens cDNA clone IMAGE:1100704 3' similar to TR.E239140
5170	17738	30167	1.07	0.0E+00	AA601246.1	EST_HUMAN	no14g09.s1 NCL_CGAP_Phe1 Homo sapiens cDNA clone IMAGE:1100704 3' similar to TR.E239140
5172	17739	30168	0.96	0.0E+00	AF161463.1	NT	Homo sapiens HSPC114 mRNA, complete cds
5172	17739	30169	0.96	0.0E+00	AF161463.1	NT	Homo sapiens HSPC114 mRNA, complete cds
5183	12887	25374	0.58	0.0E+00	AF195658.1	NT	Homo sapiens DNA mismatch repair protein (MLH3) gene, complete cds
5188	17753		1.72	0.0E+00	4758225	NT	Homo sapiens E2F transcription factor 2 (E2F2) mRNA
5189	17764	30189	0.94	0.0E+00	AF016705.1	NT	Homo sapiens E8-AP ubiquitin-protein ligase (UBE3A) gene, exon 3
5204	17769	30192	0.67	0.0E+00	U53588.1	NT	Homo sapiens MHC class 1 region
5211	17776		1.3	0.0E+00	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
5214	17779		29.82	0.0E+00	D50657.1	NT	Homo sapiens gamma-cytoplasmic actin (ACTGP3) pseudogene
5245	17809	30231	3.36	0.0E+00	X52988.1	NT	Bacillus amyloliquefaciens sacB gene for levansucrase (EC 2.4.1.10)
5266	17828	30252	1.23	0.0E+00	AF240835.1	NT	Homo sapiens vascular endothelial cadherin 2 mRNA, complete cds
5266	17828	30253	1.23	0.0E+00	AF240835.1	NT	Homo sapiens vascular endothelial cadherin 2 mRNA, complete cds
5267	17829	30254	0.96	0.0E+00	5454153	NT	Homo sapiens cyclophilin (USA-CYP) mRNA
5282	17844	30271	0.95	0.0E+00	6677700	NT	Homo sapiens G-protein coupled receptor (RE2), mRNA
5298	17890	30285	0.77	0.0E+00	5902055	NT	Homo sapiens ring finger protein (RNF), mRNA
5300	17862	30286	1.03	0.0E+00	M10905.1	NT	Human cellular fibronectin mRNA
5300	17862	30287	1.03	0.0E+00	M10905.1	NT	Human cellular fibronectin mRNA
5301	17863	30288	0.93	0.0E+00	U91328.1	NT	Human hereditary haemochromatosis region, histone 2A-like protein gene, hereditary haemochromatosis (HLA-H) gene, RoRet gene, and sodium phosphate transporter (NPT3) gene, complete cds
5308	17870	30292	0.84	0.0E+00	Y08032.1	NT	Human endogenous retrovirus-K, LTR U5 and gag gene
5326	17898	30304	0.67	0.0E+00	5902091	NT	Homo sapiens solute carrier family 5 (inositol transporters), member 3 (SLC5A3), mRNA
5333	17894	30308	1.1	0.0E+00	L35475.1	NT	Homo sapiens olfactory receptor-like gene, complete cds
5333	17894	30309	1.1	0.0E+00	L35475.1	NT	Homo sapiens olfactory receptor-like gene, complete cds
5340	17901	30316	0.81	0.0E+00	7708245	NT	Homo sapiens 4F2 light chain (LOC51597), mRNA
5340	17901	30317	0.81	0.0E+00	7708245	NT	Homo sapiens 4F2 light chain (LOC51597), mRNA
5341	17902	30318	0.8	0.0E+00	7662421	NT	Homo sapiens KIAA0871 protein (KIAA0871), mRNA

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5347	17907	30322	25.99	0.0E+00	J02610.1	NT	Human apolipoprotein B-100 mRNA, complete cds
5355	17915	30330	0.98	0.0E+00	U71601.1	NT	Human zinc finger protein zfp47 (Zf47) mRNA, partial cds
5357	17917	30332	1.06	0.0E+00	P51523	SWISSPROT	ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2)
5365	17925	30339	9.37	0.0E+00	M19828.1	NT	Human apolipoprotein B-100 (apoB) gene, exons 22 through 29
5373	17932	30346	11.28	0.0E+00	5360213	NT	Human apolipoprotein B-100 (apoB) gene, exons 22 through 29
5374	17933	30347	1.1	0.0E+00	4826777	NT	Homo sapiens glypican 3 (GPC3) mRNA
5377	17936	30349	0.68	0.0E+00	AE000327.1	NT	Homo sapiens junonil (mouse) homolog (JUNL) mRNA
5385	17944	30357	8.06	0.0E+00	4502152	NT	Escherichia coli K-12 MG1655 section 217 of 400 of the complete genome
5399	17957	30368	1.01	0.0E+00	4885474	NT	Homo sapiens apolipoprotein B (including Ag(x) antigen) (APOB) mRNA
5430	17987	30391	1.56	0.0E+00	4826977	NT	Homo sapiens melanoma antigen, family C, 1 (MAGEC1), mRNA
5451	18020	30411	3.55	0.0E+00	AF093093.1	NT	Homo sapiens reelin (RELN) mRNA
5459	18094	30412	2.26	0.0E+00	AF137286.1	NT	Homo sapiens acinifase (ACO2) gene, nuclear gene encoding mitochondrial protein, exon 15
5459	18094	30412	2.26	0.0E+00	AF137286.1	NT	Homo sapiens keratin 12 (KRT12) gene, complete cds
5478	18112	30521	1.27	0.0E+00	A1934954.1	EST_HUMAN	Homo sapiens keratin 12 (KRT12) gene, complete cds
5481	18115	30524	2.18	0.0E+00	9256579	NT	Homo sapiens keratin 12 (KRT12) gene, complete cds
5495	18129	30537	3.75	0.0E+00	BE931080.1	EST_HUMAN	wp06g08.x1 NCI CGAP Kid12 Homo sapiens cDNA clone IMAGE:2464094 3'
5499	18133	30541	3.31	0.0E+00	AF182034.1	NT	Homo sapiens protocadherin alpha 13 (PCDH13), mRNA
5499	18133	30542	3.31	0.0E+00	AF182034.1	NT	RC3-GN0076-310800-013-b03 GN0076 Homo sapiens cDNA
5506	18139	30550	2.06	0.0E+00	X56163.1	NT	Homo sapiens polycystic kidney disease-like 2 protein (PKDL2) mRNA, complete cds
5506	18139	30551	2.06	0.0E+00	X56163.1	NT	Homo sapiens polycystic kidney disease-like 2 protein (PKDL2) mRNA, complete cds
5506	18139	30551	2.06	0.0E+00	X56163.1	NT	H. sapiens immunoglobulin heavy chain gene, variable region
5584	18215	30694	5.94	0.0E+00	BE675498.1	EST_HUMAN	H. sapiens immunoglobulin heavy chain gene, variable region
5585	18216	30695	1.67	0.0E+00	BE220753.1	EST_HUMAN	710c06.x1 NCI CGAP CLL1 Homo sapiens cDNA clone IMAGE:3294250 3'
5586	18217	30696	1.58	0.0E+00	BE794412.1	EST_HUMAN	h199a02.x1 NCI CGAP Lu24 Homo sapiens cDNA clone IMAGE:3294250 3'
5586	18217	30697	1.58	0.0E+00	BE794412.1	EST_HUMAN	P42894 HYPOTHETICAL PROTEIN KIAA0054.1
5589	18220	30670	7.35	0.0E+00	M29808.1	NT	601589422F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943804 5'
5600	24746	30678	4.43	0.0E+00	11421038	NT	601589422F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943804 5'
5609	18238	30694	1.68	0.0E+00	BE665962.1	EST_HUMAN	Homo sapiens Sp4 transcription factor (SP4), mRNA
5614	18243	30694	0.8	0.0E+00	BE539857.1	EST_HUMAN	602118928F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4276254 5'
5622	18251	30719	1.49	0.0E+00	BE292784.1	EST_HUMAN	601061489F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3447839 5'
5628	18255	30724	2.5	0.0E+00	BF526328.1	EST_HUMAN	601105891F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2888310 5'
5628	18255	30725	2.5	0.0E+00	BF526328.1	EST_HUMAN	602071372F1 NCI CGAP Bm64 Homo sapiens cDNA clone IMAGE:4214272 5'
5645	19606	32325	2.91	0.0E+00	4557364	NT	602071372F1 NCI CGAP Bm64 Homo sapiens cDNA clone IMAGE:4214272 5'
5648	18276	30751	0.9	0.0E+00	AB007835.1	NT	Homo sapiens Bloom syndrome (BLM) mRNA
							Homo sapiens mRNA for KIAA0466 protein, partial cds



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5648	18276	30752	0.9	0.0E+00	AB007935.1	NT	Homo sapiens mRNA for KIAA0466 protein, partial cds
5652	18279	30756	4.93	0.0E+00	AF257737.1	NT	Homo sapiens ciliary dynein heavy chain 9 (DNAH9) mRNA, complete cds
5652	18279	30757	4.93	0.0E+00	AF257737.1	NT	Homo sapiens ciliary dynein heavy chain 9 (DNAH9) mRNA, complete cds
5665	18282	30771	1.42	0.0E+00	D26535.1	NT	Human gene for dihydrolipoamide succinyltransferase, complete cds (exon 1-15)
5665	18292	30772	1.42	0.0E+00	D26535.1	NT	Human gene for dihydrolipoamide succinyltransferase, complete cds (exon 1-15)
5680	18307	30803	1.98	0.0E+00	11420819	NT	Homo sapiens ciliary receptor, family 2, subfamily F, member 1 (OR2F1), mRNA
5686	18312	30809	0.86	0.0E+00	Z38133.1	NT	H. sapiens mRNA for myosin
5704	18330	30833	0.89	0.0E+00	D61564.1	EST_HUMAN	HUM418D05B Clontech human fetal brain polyA+ mRNA (#5535) Homo sapiens cDNA clone GEN-418D05
5704	18330	30834	0.89	0.0E+00	D61564.1	EST_HUMAN	HUM418D05B Clontech human fetal brain polyA+ mRNA (#5535) Homo sapiens cDNA clone GEN-418D05
5707	18333	30838	5.12	0.0E+00	BF529931.1	EST_HUMAN	602042322F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4179988 5'
5707	18333	30839	5.12	0.0E+00	BF529931.1	EST_HUMAN	602042322F1 NCI_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4179988 5'
5712	18338	30843	2.7	0.0E+00	BF313139.1	EST_HUMAN	601897658F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4126815 5'
5723	18349	31052	4.03	0.0E+00	11434392	NT	Homo sapiens calcium channel, voltage-dependent, alpha 1G subunit (CACNA1G), mRNA
5753	18379	31090	1.49	0.0E+00	BE280777.1	EST_HUMAN	601150252F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3502908 5'
5762	18388		4.96	0.0E+00	AW887316.1	EST_HUMAN	MRO-SN0037-030400-001-h07 SN0037 Homo sapiens cDNA
5775	18400	31114	2.42	0.0E+00	BE292889.1	EST_HUMAN	601105291F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2987903 5'
5775	18400	31115	2.42	0.0E+00	BE292889.1	EST_HUMAN	601105291F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2987903 5'
5783	18418	31133	1.67	0.0E+00	11420819	NT	Homo sapiens ciliary receptor, family 2, subfamily F, member 1 (OR2F1), mRNA
5783	18418	31134	1.67	0.0E+00	11420819	NT	Homo sapiens ciliary receptor, family 2, subfamily F, member 1 (OR2F1), mRNA
5800	18425	31142	4.39	0.0E+00	AF064254.1	NT	Homo sapiens very long-chain acyl-CoA synthetase homolog 1 mRNA, complete cds
5800	18425	31143	4.39	0.0E+00	AF064254.1	NT	Homo sapiens very long-chain acyl-CoA synthetase homolog 1 mRNA, complete cds
5808	18431	31151	2.56	0.0E+00	AJ224639.1	NT	Homo sapiens Surf-5 and Surf-6 genes
5808	18431	31152	2.56	0.0E+00	AJ224639.1	NT	Homo sapiens Surf-5 and Surf-6 genes
5833	18457	31178	0.72	0.0E+00	AI198515.1	EST_HUMAN	qf94g10.x1 Soares, placenta, 8to6weeks_2Nbp-P8ta09W Homo sapiens cDNA clone IMAGE:1757730 3'
5837	18461	31184	6.38	0.0E+00	M85719.1	EST_HUMAN	similar to SW:CADDC_HUMAN P55289 BRAIN-CADHERIN PRECURSOR ;
5844	18468	31193	6.29	0.0E+00	AW405472.1	EST_HUMAN	EST022338 Fetal brain, Striatogene (cat#938206) Homo sapiens cDNA clone HFBM48
5856	18479	31202	1.35	0.0E+00	Z26269.1	NT	U1-HF-BL0-adh-d-02-0-U1.r1 NIH_MGC_37 Homo sapiens cDNA clone IMAGE:3061858 5'
5866	18488	31213	1.78	0.0E+00	AW361877.1	EST_HUMAN	H. sapiens isoform 1 gene for L-type calcium channel, exon 14 end 15
5866	18488	31214	1.78	0.0E+00	AW361877.1	EST_HUMAN	PM3-CT0263-091299-007-h05 CT0263 Homo sapiens cDNA
5866	18488	31214	1.78	0.0E+00	AW361877.1	EST_HUMAN	PM3-CT0263-091299-007-h05 CT0263 Homo sapiens cDNA
5870	18492	31219	1.91	0.0E+00	U36261.1	NT	Human beta-prime-adaptin (BAM22) gene, exon 13

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5897	18519	31244	1.02	0.0E+00	AB046881.1	NT	Homo sapiens mRNA for KIAA1641 protein, partial cds
5951	18573	31305	1.46	0.0E+00	AJ006345.1	NT	Homo sapiens KVLQT1 gene
5951	18573	31306	1.46	0.0E+00	AJ006345.1	NT	Homo sapiens KVLQT1 gene
5958	18580	31315	1.29	0.0E+00	AI207616.1	EST_HUMAN	HA2981 Human fetal liver cDNA library Homo sapiens cDNA
5975	18595	31330	4.89	0.0E+00	11416801	NT	Homo sapiens protocadherin beta 2 (PCDH2), mRNA
5980	18600	31333	1.09	0.0E+00	BE791173.1	EST_HUMAN	601584032F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3938551 5'
5987	18607	31341	1.29	0.0E+00	9998943	NT	Homo sapiens amiloride-sensitive cation channel 1, neuronal (degenerin) (ACCN1), mRNA
5988	18608	31342	6.36	0.0E+00	BE560082.1	EST_HUMAN	601345141F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3677843 5'
5989	18609	31343	1.48	0.0E+00	10048478	NT	Mus musculus aczonin (Acz), mRNA
5990	18610	31344	3.25	0.0E+00	U86961.1	NT	Human L-type calcium channel beta-1 subunit (CACNLB1) gene, exon 13B and isoform beta-1B, complete cds
5990	18610	31345	3.25	0.0E+00	U86961.1	NT	Human L-type calcium channel beta-1 subunit (CACNLB1) gene, exon 13B and isoform beta-1B, complete cds
6008	18628	31363	2.23	0.0E+00	BF338635.1	EST_HUMAN	602036272F1 NCI_CGAP_Bm64 Homo sapiens cDNA clone IMAGE:4184321 5'
6010	18630	31365	0.88	0.0E+00	AF142621.1	NT	Homo sapiens calcium channel gamma 5 subunit (CACNG5) gene, exon 4 and complete cds
6011	18631	31366	3.17	0.0E+00	BE273983.1	EST_HUMAN	601104462F1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:3347463 5'
6020	18639	31379	1.22	0.0E+00	BE503096.1	EST_HUMAN	hz83d11.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3214581 3' similar to TR:Q62084 Q62084
6024	18643	31385	2.27	0.0E+00	BF56995.1	EST_HUMAN	PHOSPHOLIPASE C NEIGHBORING
6028	18647	31388	1.14	0.0E+00	AA454642.1	EST_HUMAN	602185852F1 NIH_MGC_45 Homo sapiens cDNA clone IMAGE:4310076 5'
6060	18677	31419	3.11	0.0E+00	AF217289.1	NT	z99d06.s1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:811883 3'
6062	18679	31421	2.35	0.0E+00	BE828144.1	EST_HUMAN	Homo sapiens cadherin 20 (CDH20) mRNA, complete cds
6066	18683	31425	1.25	0.0E+00	BE958636.1	EST_HUMAN	RC5-ET0027-210600-022-G10 ET0027 Homo sapiens cDNA
6083	18700	31447	0.9	0.0E+00	AW278760.1	EST_HUMAN	601645287F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:3930453 5'
6093	18709	31457	0.96	0.0E+00	BF031742.1	EST_HUMAN	xp65f03.x1 NCI_CGAP_Ov39 Homo sapiens cDNA clone IMAGE:2745245 3' similar to TR:P78335 P78335
6093	18709	31458	0.96	0.0E+00	BF031742.1	EST_HUMAN	GUANYLATE KINASE ASSOCIATED PROTEIN
6104	18720	31473	1.03	0.0E+00	AW470846.1	EST_HUMAN	601568060F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:3827775 5'
6115	18731	31483	1.1	0.0E+00	BF155670.1	EST_HUMAN	601568060F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:3827775 5'
6115	18731	31484	1.1	0.0E+00	BF155670.1	EST_HUMAN	ha34d06.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2875595 3' similar to TR:Q9Z1N3
6123	18738	31490	1.38	0.0E+00	W33069.1	EST_HUMAN	Q9Z1N3 MYOSIN-RHO GAP PROTEIN, MYR 7
6123	18738	31491	1.38	0.0E+00	W33069.1	EST_HUMAN	QV4-HT0894-290900-399-a10 HT0894 Homo sapiens cDNA
6124	18739		2.2	0.0E+00	AF012618.1	NT	QV4-HT0894-290900-399-a10 HT0894 Homo sapiens cDNA
							z008h06.r1 Soares_parathyroid_tumor_NbHPPA Homo sapiens cDNA clone IMAGE:321755 5'
							z008h06.r1 Soares_parathyroid_tumor_NbHPPA Homo sapiens cDNA clone IMAGE:321755 5'
							Homo sapiens familial mental retardation protein 2 (FMR2) gene, exon 14

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Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6127	18742	31495	3.14	0.0E+00	BE280197.1	EST_HUMAN	601158515F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3505023 5'
6133	18747	31503	1.88	0.0E+00	BE889810.1	EST_HUMAN	601512830F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3914238 5'
6148	18761	31520	1.46	0.0E+00	11433071	NT	Homo sapiens KIAA0735 gene product: synaptic vesicle protein 2B homolog (KIAA0735), mRNA
6148	18761	31521	1.46	0.0E+00	11433071	NT	Homo sapiens KIAA0735 gene product: synaptic vesicle protein 2B homolog (KIAA0735), mRNA
6149	18762	31522	1.15	0.0E+00	BE901608.1	EST_HUMAN	601677735F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3960200 5'
6149	18762	31523	1.15	0.0E+00	BE901608.1	EST_HUMAN	601677735F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3960200 5'
6149	18762	31524	1.15	0.0E+00	BE901608.1	EST_HUMAN	601677735F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3960200 5'
6194	24758	31540	10.16	0.0E+00	9789988	NT	Homo sapiens potassium voltage-gated channel, Shal-related subfamily, member 2 (KCND2), mRNA
6197	18779	31543	1.38	0.0E+00	AA193506.1	EST_HUMAN	zr40h01.1 Soares NIH-MPc S1 Homo sapiens cDNA clone IMAGE:665905 5' similar to SW:YY05_HUMAN P42894 HYPOTHETICAL MYELOID CELL LINE PROTEIN 5. ;
6197	18779	31544	1.38	0.0E+00	AA193506.1	EST_HUMAN	zr40h01.1 Soares NIH-MPc S1 Homo sapiens cDNA clone IMAGE:665905 5' similar to SW:YY05_HUMAN P42894 HYPOTHETICAL MYELOID CELL LINE PROTEIN 5. ;
6180	18799	31568	12.83	0.0E+00	U34625.1	NT	Human T cell surface glycoprotein CD-8 mRNA, complete cds
6189	18799	31569	12.83	0.0E+00	U34625.1	NT	Human T cell surface glycoprotein CD-8 mRNA, complete cds
6228	18838	31611	1.35	0.0E+00	BE258330.1	EST_HUMAN	601114823F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3355565 5'
6238	18847	31618	1.64	0.0E+00	BE156561.1	EST_HUMAN	QV0-HT0368-090200-099-e08 HT0368 Homo sapiens cDNA
6280	18888	31657	1.54	0.0E+00	BE378007.1	EST_HUMAN	601236276F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3608490 5'
6288	18894	31683	1.23	0.0E+00	AU137772.1	EST_HUMAN	AU137772 PLACE1 Homo sapiens cDNA clone IMAGE:1007201 5'
6306	18913	31687	3.42	0.0E+00	U45982.1	NT	Human G protein-coupled receptor GPR-9-8 gene, complete cds
6334	18940	31717	4.13	0.0E+00	AA204740.1	EST_HUMAN	zr81d03.1 Stragene hNT neuron (8937233) Homo sapiens cDNA clone IMAGE:948005 5' similar to TR:G854195 G854195 LEUKOCYTE SURFACE PROTEIN. ;
6335	18941	31718	3.66	0.0E+00	11545913	NT	Homo sapiens xylotransferase II (XT2), mRNA
6335	18941	31719	3.66	0.0E+00	11545913	NT	Homo sapiens xylotransferase II (XT2), mRNA
6354	18959	31737	0.7	0.0E+00	U07223.1	NT	Human beta2-chimaerin mRNA, complete cds
6371	18975	31753	1.87	0.0E+00	11426367	NT	Homo sapiens carcinoembryonic antigen-related cell adhesion molecule 8 (CEACAM8), mRNA
6375	18978	31758	3.62	0.0E+00	BE257173.1	EST_HUMAN	601109532F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3350622 5'
6388	18991		0.94	0.0E+00	AI696048.1	EST_HUMAN	tr91f10.x1 NCI CGAP_P128 Homo sapiens cDNA clone IMAGE:2248939 3' similar to TR:Q14839 Q14839 MI-2 PROTEIN. ;
6392	18995	31774	1.39	0.0E+00	L35630.1	NT	Human anion exchanger (AE1) gene, exons 1-20
6401	19004	31782	1.03	0.0E+00	BE787385.1	EST_HUMAN	601587971F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3942329 5'
6401	19004	31783	1.03	0.0E+00	BE787385.1	EST_HUMAN	601587971F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3942329 5'
6411	19014	31796	0.96	0.0E+00	BF357123.1	EST_HUMAN	MRO-HT0923-220800-102-b05 HT0923 Homo sapiens cDNA
6419	19022	31806	1.53	0.0E+00	11435630	NT	Homo sapiens peptide transporter 3 (LOC51296), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6428	19031	31814	0.96	0.0E+00	D56649.1	NT	Human mRNA for alpha mannosidase II isozyme, complete cds
6442	19044	31832	1.11	0.0E+00	AW178142.1	EST_HUMAN	IL3-HT0062-010899-014-A04 HT0082 Homo sapiens cDNA
6462	19063	31848	0.78	0.0E+00	BE674544.1	EST_HUMAN	7e02c12.x1 NCI CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3281302 3' similar to SW:Y176_HUMAN
6466	19067	31853	0.96	0.0E+00	7662039	NT	Q14681 HYPOTHETICAL PROTEIN KIAA0176 ;
6480	19081		8.14	0.0E+00	AV650020.1	EST_HUMAN	Homo sapiens KIAA0285 gene product (KIAA0285), mRNA
6487	19088	31871	3.19	0.0E+00	AW575598.1	EST_HUMAN	AV650020 GLC Homo sapiens cDNA clone GLCAD09 3'
6490	19091	31874	5.26	0.0E+00	H01255.1	EST_HUMAN	UI-HF-BL0-acc-g-12-0-UI.s1 NIH_MGC_37 Homo sapiens cDNA clone IMAGE:3058751 3'
6501	19101	31886	3.3	0.0E+00	X15377.1	NT	y127b03.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:149933 5'
6503	19103	31888	1.02	0.0E+00	AI612841.1	EST_HUMAN	Human gene for the light and heavy chains of myeloperoxidase
6509	19109	31894	4.19	0.0E+00	BE735989.1	EST_HUMAN	tz57d08.x1 NCI CGAP_Ov45 Homo sapiens cDNA clone IMAGE:2292887 3' similar to SW:NTCS_HUMAN
6509	19109	31895	4.19	0.0E+00	BE735989.1	EST_HUMAN	PS3796 SODIUM- AND CHLORIDE-DEPENDENT CREATINE TRANSPORTER 2 ;
6513	19113	31902	0.83	0.0E+00	AW748596.1	EST_HUMAN	601305368F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3639616 5'
6515	19115	31904	167.16	0.0E+00	AU119245.1	EST_HUMAN	601305368F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3639616 5'
6515	19115	31905	167.16	0.0E+00	AU119245.1	EST_HUMAN	MRO-BT0284-221199-002-f11 BT0284 Homo sapiens cDNA
6519	19119	31910	0.89	0.0E+00	BE780453.1	EST_HUMAN	MRO-BT0284-221199-002-f11 BT0284 Homo sapiens cDNA
6520	19120	31911	0.89	0.0E+00	X92217.1	NT	AU119245 HEMBA1 Homo sapiens cDNA clone HEMBA1005360 5'
6531	19131	31925	1.96	0.0E+00	AI989483.1	EST_HUMAN	AU119245 HEMBA1 Homo sapiens cDNA clone HEMBA1005360 5'
6543	19142	31934	2.84	0.0E+00	BE293153.1	EST_HUMAN	AU119245 HEMBA1 Homo sapiens cDNA clone HEMBA1005360 5'
6543	19142	31935	2.84	0.0E+00	BE293153.1	EST_HUMAN	601468712F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3871899 5'
6606	19203	32009	1.05	0.0E+00	AW406348.1	EST_HUMAN	H. sapiens germ-line immunoglobulin heavy chain, variable region, (13-2)
6606	19203	32010	1.05	0.0E+00	AW406348.1	EST_HUMAN	ws25c07.x1 NCI CGAP_GC6 Homo sapiens cDNA clone IMAGE:2498220 3'
6634	19230	32034	5.36	0.0E+00	AV719444.1	EST_HUMAN	601105344F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2987963 5'
6642	19238	32040	1.02	0.0E+00	BE898340.1	EST_HUMAN	601105344F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2987963 5'
6642	19238	32041	1.02	0.0E+00	BE898340.1	EST_HUMAN	UI-HF-BL0-acc-h-02-0-UI.r1 NIH_MGC_37 Homo sapiens cDNA clone IMAGE:3059931 5'
6645	19241	32044	2.16	0.0E+00	AF190860.1	NT	UI-HF-BL0-acc-h-02-0-UI.r1 NIH_MGC_37 Homo sapiens cDNA clone IMAGE:3059931 5'
6648	19244	32046	1.05	0.0E+00	11420658	NT	AV719444 GLC Homo sapiens cDNA clone GLCEHC06 5'
6655	19251	32053	3.35	0.0E+00	AW163640.1	EST_HUMAN	601681150F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3951301 5'
6655	19251	32054	3.35	0.0E+00	AW163640.1	EST_HUMAN	601681150F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3951301 5'
							Homo sapiens low voltage-activated T-type calcium channel alpha 1G splice variant CavT.1a (CACNA1G) mRNA, complete cds
							Homo sapiens transcription/transcription domain-associated protein (TRRAP), mRNA
							au96h08.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2784159 5' similar to
							TR:O15390 O15390 GT24. [3] TR:O43840 TR:O43206 ;
							au96h08.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2784159 5' similar to
							TR:O15390 O15390 GT24. [3] TR:O43840 TR:O43206 ;

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6659	19255	32057	0.97	0.0E+00	W37163.1	EST_HUMAN	zb20a06.r1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:302626 5' similar to SW:ZN45 HUMAN Q02386 ZINC FINGER PROTEIN 45;
6659	19255	32058	0.97	0.0E+00	W37163.1	EST_HUMAN	zb20a06.r1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:302626 5' similar to SW:ZN45 HUMAN Q02386 ZINC FINGER PROTEIN 45;
6671	19267	32071	1.09	0.0E+00	BE794853.1	EST_HUMAN	601589371F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943504 5'
6678	19274	32078	4.45	0.0E+00	BE799873.1	EST_HUMAN	601587561F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3941847 5'
6682	19278	32081	7.35	0.0E+00	BE889813.1	EST_HUMAN	601512058F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913311 5'
6682	19278	32082	7.35	0.0E+00	BE889813.1	EST_HUMAN	601512058F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913311 5'
6689	19285	32088	3.81	0.0E+00	L24493.1	NT	Human antigen CD27 gene, exons 1-2
6694	19290	32092	2.03	0.0E+00	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
6694	19290	32092	2.03	0.0E+00	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
6700	19296	32100	3.54	0.0E+00	6005983	NT	Homo sapiens zona pellucida glycoprotein 3A (sperm receptor) (ZP3A), mRNA
6703	19298	32102	3.88	0.0E+00	AB38412.1	EST_HUMAN	tt31f1.x1 NCI_CGAP_G66 Homo sapiens cDNA clone IMAGE:2242413 3' similar to SW:WNT3_MOUSE P17553 WNT-3 PROTO-ONCOGENE PROTEIN PRECURSOR;
6704	19299	32103	1.36	0.0E+00	L32832.1	NT	Homo sapiens zinc finger homeodomain protein (ATBF1-A) mRNA, complete cds
6714	19308	32112	0.78	0.0E+00	AW505430.1	EST_HUMAN	UI-HF-BNO-ama-c-01-0-U1.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3081217 5'
6716	19310	32113	3.78	0.0E+00	AA434584.1	EST_HUMAN	zw52c03.r1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:3081217 5'
6730	19324		1.08	0.0E+00	BF217200.1	EST_HUMAN	601885317F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4103693 5'
6734	19328	32133	1.72	0.0E+00	BE925875.1	EST_HUMAN	QV3-BN0047-300800-278-c06 BN0047 Homo sapiens cDNA
6774	19366	32178	1.98	0.0E+00	AU125928.1	EST_HUMAN	AU125928 NT2RM4 Homo sapiens cDNA clone NT2RM4002430 5'
6776	19368	32180	0.73	0.0E+00	BE701434.1	EST_HUMAN	PM2-NN0174-260700-001-h10 NN0174 Homo sapiens cDNA
6776	19368	32181	0.73	0.0E+00	BE701434.1	EST_HUMAN	PM2-NN0174-260700-001-h10 NN0174 Homo sapiens cDNA
6795	19386	32202	1.26	0.0E+00	BE142363.1	EST_HUMAN	GM0-HT0143-270698-062-008 HT0143 Homo sapiens cDNA
6815	19406	32222	0.91	0.0E+00	BE006012.1	EST_HUMAN	RCO-BN0121-280300-032-004 BN0121 Homo sapiens cDNA
6815	19406	32223	0.91	0.0E+00	BE006012.1	EST_HUMAN	RCO-BN0121-280300-032-004 BN0121 Homo sapiens cDNA
6835	19425	32241	7.25	0.0E+00	BE169131.1	EST_HUMAN	PM3-HT0520-230200-002-c08 HT0520 Homo sapiens cDNA
6837	19427	32243	1.62	0.0E+00	BF085687.1	EST_HUMAN	IL5-GN0032-180900-145-d07 GN0032 Homo sapiens cDNA
6873	19607	32441	3.11	0.0E+00	AA190755.1	EST_HUMAN	zp88a03.r1 Stratiene HeLa cell s3 837216 Homo sapiens cDNA clone IMAGE:627292 5'
6882	19617	32452	0.99	0.0E+00	U39573.1	NT	Human salivary peroxidase mRNA, complete cds
6885	19620	32454	0.72	0.0E+00	BE671987.1	EST_HUMAN	7449007.x1 NCI_CGAP_G66 Homo sapiens cDNA clone IMAGE:3222037 3' similar to TR:Q9Z285 Q9Z285 TEKIN;
6892	19626	32462	6.2	0.0E+00	A1940621.1	EST_HUMAN	IL3-ST0024-230799-001-B01 ST0024 Homo sapiens cDNA
6892	19626	32463	6.2	0.0E+00	A1940621.1	EST_HUMAN	IL3-ST0024-230799-001-B01 ST0024 Homo sapiens cDNA
6902	19636	32474	2.67	0.0E+00	11435626	NT	Homo sapiens CD6 antigen (CD6), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6913	19572	32401	0.94	0.0E+00	AL042443.1	EST_HUMAN	DKFZp434D2021_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434D2021 5'
6916	19575	32404	0.84	0.0E+00	AI168270.1	EST_HUMAN	oo10d01.x1 Soares NSF_F8_gw_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:1565761 3' similar to
6921	19580	32409	0.89	0.0E+00	BE734087.1	EST_HUMAN	TR:Q26623 Q26623 TEK.TIN C1 ;
6936	18044	30466	1.22	0.0E+00	BE566381.1	EST_HUMAN	601339977F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3842080 5'
6943	18051	30473	13.34	0.0E+00	BE867889.1	EST_HUMAN	601339977F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3682267 5'
6943	18051	30474	13.34	0.0E+00	BE867889.1	EST_HUMAN	601443667F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3847697 5'
6948	19525	32347	1.75	0.0E+00	BE550162.1	EST_HUMAN	601443667F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3847697 5'
6948	19525	32348	1.75	0.0E+00	BE550162.1	EST_HUMAN	7b4903.x1 NCI CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3231581 3' similar to SW:GG95_HUMAN
6970	19547	32371	2.55	0.0E+00	BF088376.1	EST_HUMAN	7b4903.x1 NCI CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3231581 3' similar to SW:GG95_HUMAN
6977	19553	32378	2.01	0.0E+00	AA195106.1	EST_HUMAN	Q08379 GOLGIN-95 ;
6984	19482		10.79	0.0E+00	11034810	NT	Q08379 GOLGIN-95 ;
6986	19484	32305	1.11	0.0E+00	11431474	NT	7b4903.x1 NCI CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3231581 3' similar to SW:GG95_HUMAN
7001	19499	32319	2.35	0.0E+00	BF569905.1	EST_HUMAN	Q08379 GOLGIN-95 ;
7008	19506	32325	0.75	0.0E+00	4557364	NT	CM1-HT0877-060900-397-g11 HT0877 Homo sapiens cDNA
7016	19514	32383	2.49	0.0E+00	J03069.1	NT	z34g03.r1 Soares NihHMPu_S1 Homo sapiens cDNA clone IMAGE:665332 5'
7024	19558	32384	4.16	0.0E+00	AF217289.1	NT	Homo sapiens catenin (cadherin-associated protein), delta 2 (neural plakophilin-related arm-repeat protein)
7025	19559	32385	1	0.0E+00	M58113.1	NT	(CTNND2), mRNA
7036	18056	30479	2.94	0.0E+00	11420775	NT	Homo sapiens sodium channel, nonvoltage-gated 1, beta (Liddle syndrome) (SCNN1B), mRNA
7039	18059	30481	0.69	0.0E+00	BE256708.1	EST_HUMAN	602185852F1 NIH_MGC_45 Homo sapiens cDNA clone IMAGE:4310076 5'
7057	18076	30428	1.11	0.0E+00	AU118478.1	EST_HUMAN	Homo sapiens Bloem syndrome (BLM) mRNA
7059	18078	30432	4.93	0.0E+00	BE262841.1	EST_HUMAN	Human MYCL2 gene, complete cds
7060	18079	30433	2.1	0.0E+00	Z37976.1	NT	Homo sapiens cadherin 20 (CDH20) mRNA, complete cds
7060	18079	30434	2.1	0.0E+00	Z37976.1	NT	Homo sapiens cadherin 20 (CDH20) mRNA, complete cds
7061	18080	30435	2.68	0.0E+00	AF257737.1	NT	Human neurofibromatosis type 1 gene, exon x8
7061	18080	30436	2.68	0.0E+00	AF257737.1	NT	Homo sapiens melanoma antigen, family B, 2 (MAGEB2), mRNA
7066	18085	30441	1.44	0.0E+00	AF310105.1	NT	601115515F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3356330 5'
7071	19643	32480	0.88	0.0E+00	BE762770.1	EST_HUMAN	AU118478 HEMBA1 Homo sapiens cDNA clone HEMBA1003679 5'
7075	19647	32485	2.59	0.0E+00	BF569905.1	EST_HUMAN	601148954F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3501828 5'
7079	19651	32490	3.92	0.0E+00	L01978.1	NT	H. sapiens mRNA for latent transforming growth factor-beta binding protein (LTBP-2)
							H. sapiens mRNA for latent transforming growth factor-beta binding protein (LTBP-2)
							Homo sapiens ciliary dynein heavy chain 9 (DNAH9) mRNA, complete cds
							Homo sapiens ciliary dynein heavy chain 9 (DNAH9) mRNA, complete cds
							Homo sapiens NALP1 mRNA, complete cds
							QV3-NT0022-140600-223-01 NT0022 Homo sapiens cDNA
							602185852F1 NIH_MGC_45 Homo sapiens cDNA clone IMAGE:4310076 5'
							Human type IV sodium channel alpha polypeptide (SCN4A) gene, exon 19

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7089	19660	32499	0.82	0.0E+00	AL039581.1	EST_HUMAN	DKFZp434D2211_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434D2211 5'
7089	19660	32500	0.82	0.0E+00	AL039581.1	EST_HUMAN	DKFZp434D2211_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434D2211 5'
7095	19666	32505	8.1	0.0E+00	BF306996.1	EST_HUMAN	601889823F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4123948 5'
7100	19670	32509	2.1	0.0E+00	U41302.1	NT	Human chromosome 16 creatine transporter (SLC6A8) and (CDM) paralogous genes, complete cds
7132	19472	32292	1.1	0.0E+00	AL049784.1	NT	Novel human gene mapping to chromosome 13
7167	19699	32546	0.89	0.0E+00	AU137738.1	EST_HUMAN	AU137738 PLACE1 Homo sapiens cDNA clone PLACE1007120 5'
7167	19699	32547	0.89	0.0E+00	AU137738.1	EST_HUMAN	AU137738 PLACE1 Homo sapiens cDNA clone PLACE1007120 5'
7173	19705	32553	1.43	0.0E+00	AW954808.1	EST_HUMAN	EST368878 IMAGE resequenced, MAGC Homo sapiens cDNA
7174	19706	32554	1.06	0.0E+00	BE254103.1	EST_HUMAN	601113958F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3354568 5'
7187	19719	32566	1.23	0.0E+00	L01973.1	NT	Human type VI sodium channel alpha polypeptide (SCN4A) gene, exon 14
7195	19726	32576	0.71	0.0E+00	AB007935.1	NT	Homo sapiens mRNA for KIAA0466 protein, partial cds
7195	19726	32577	0.71	0.0E+00	AB007935.1	NT	Homo sapiens mRNA for KIAA0466 protein, partial cds
7201	19732	32584	1.97	0.0E+00	AU133213.1	EST_HUMAN	AU133213 NT2RP4 Homo sapiens cDNA clone NT2RP4001558 5'
7216	19747	32603	0.86	0.0E+00	11428081	NT	Homo sapiens membrane protein CH1 (CH1), mRNA
7221	19752		2.39	0.0E+00	AU143706.1	EST_HUMAN	AU143706 Y79AA1 Homo sapiens cDNA clone Y79AA1002365 5'
7222	19753	32608	1.2	0.0E+00	4758839	NT	Homo sapiens netrin 1 (NTN1), mRNA
7231	19762	32617	1.83	0.0E+00	BE991286.1	EST_HUMAN	601431819F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3917184 5'
7231	19762	32618	1.83	0.0E+00	BE991286.1	EST_HUMAN	601431819F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3917184 5'
7252	18094	30411	2.27	0.0E+00	AF137286.1	NT	Homo sapiens keratin 12 (KRT12) gene, complete cds
7252	18094	30412	2.27	0.0E+00	AF137286.1	NT	Homo sapiens keratin 12 (KRT12) gene, complete cds
7263	19791	32646	0.78	0.0E+00	BE747231.1	EST_HUMAN	601580948F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3928722 5'
7263	19791	32647	0.78	0.0E+00	BE747231.1	EST_HUMAN	601580948F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3928722 5'
7274	19802	32659	4.67	0.0E+00	11436699	NT	Homo sapiens vitamin D (1,25-dihydroxyvitamin D3) receptor (VDR), mRNA
7274	19802	32660	4.67	0.0E+00	11436699	NT	Homo sapiens vitamin D (1,25-dihydroxyvitamin D3) receptor (VDR), mRNA
7302	19830	32688	28.85	0.0E+00	AI128344.1	EST_HUMAN	qc67a07.x1 Soares_placenta_8tb9weeks_2NbHP8t69w Homo sapiens cDNA clone IMAGE:1714844 3' similar to SW:ARSD_HUMAN P51689 ARYL SULFATASE D PRECURSOR ; contains element HGR repetitive element ;
7302	19830	32689	28.85	0.0E+00	AI128344.1	EST_HUMAN	qc67a07.x1 Soares_placenta_8tb9weeks_2NbHP8t69w Homo sapiens cDNA clone IMAGE:1714844 3' similar to SW:ARSD_HUMAN P51689 ARYL SULFATASE D PRECURSOR ; contains element HGR repetitive element ;
7304	19832	32691	4.05	0.0E+00	11426392	NT	Homo sapiens myosin, heavy polypeptide 8, skeletal muscle, perinatal (MYH8), mRNA
7304	19832	32692	4.05	0.0E+00	11426392	NT	Homo sapiens myosin, heavy polypeptide 8, skeletal muscle, perinatal (MYH8), mRNA
7307	19835		14.08	0.0E+00	BF337375.1	EST_HUMAN	602035089F1 NCL_CGAP_Brr84 Homo sapiens cDNA clone IMAGE:4182839 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7309	19837	32695	3.39	0.0E+00	AA128453.1	EST_HUMAN	zn60f09.r1 Stratagene muscle 937209 Homo sapiens cDNA clone IMAGE:562601 5' similar to TR:G806562
7314	19841	32701	0.9	0.0E+00	AL079497.1	EST_HUMAN	G806562 NEBULIN ;
7314	19841	32702	0.9	0.0E+00	AL079497.1	EST_HUMAN	DKFZp434B0226_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434B0226 5'
7349	19875	32741	1.2	0.0E+00	BE295499.1	EST_HUMAN	DKFZp434B0226_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434B0226 5'
7351	19877	32742	0.86	0.0E+00	11427965	NT	601174576F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3528794 5'
7354	19880		2.37	0.0E+00	AU118607.1	EST_HUMAN	Homo sapiens hypothetical protein (FLJ20261), mRNA
7355	19881	32745	1.77	0.0E+00	AF005213.1	NT	AU118607 HEMBA1 Homo sapiens cDNA clone HEMBA1003969 5'
7355	19881	32746	1.77	0.0E+00	AF005213.1	NT	Homo sapiens ankyrin 1 (ANK1) mRNA, complete cds
7365	19891	32754	0.99	0.0E+00	AF245505.1	NT	Homo sapiens ankyrin 1 (ANK1) mRNA, complete cds
7371	19897	32758	8.87	0.0E+00	X70172.1	NT	H. sapiens zinc finger homeodomain protein (FLJ20261), mRNA
7373	19899	32760	8.18	0.0E+00	U45448.1	NT	Homo sapiens P2X1 receptor mRNA, complete cds
7373	19899	32761	8.18	0.0E+00	U45448.1	NT	Human P2X1 receptor mRNA, complete cds
7385	19911	32775	0.98	0.0E+00	AW956503.1	EST_HUMAN	EST368573 MAGC resequences, MAGD Homo sapiens cDNA
7387	19913	32777	3.25	0.0E+00	AW950516.1	EST_HUMAN	EST362566 MAGC resequences, MAGA Homo sapiens cDNA
7408	19933	32797	1.04	0.0E+00	AF001543.1	EST_HUMAN	AF001543 Human cDNA (Chandrasekharappa,S.C.) Homo sapiens cDNA clone kappa_200
7408	19933	32798	1.04	0.0E+00	AF001543.1	EST_HUMAN	AF001543 Human cDNA (Chandrasekharappa,S.C.) Homo sapiens cDNA clone kappa_200
7408	19933	32799	1.04	0.0E+00	AF001543.1	EST_HUMAN	AF001543 Human cDNA (Chandrasekharappa,S.C.) Homo sapiens cDNA clone kappa_200
7425	19949		0.78	0.0E+00	M30354.1	NT	Human BTF3 protein homologue gene, complete cds
7426	19950	32815	0.71	0.0E+00	BE408293.1	EST_HUMAN	601302679F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3637434 5'
7451	19975		1.16	0.0E+00	R87430.1	EST_HUMAN	ym88h10.r1 Sceres adult brain N2b-HB55Y Homo sapiens cDNA clone IMAGE:166051 5'
7452	19978	32841	2.37	0.0E+00	AW239326.1	EST_HUMAN	xb39e05.y1 NCI_CGAP_Lu31 Homo sapiens cDNA clone IMAGE:2578640 5' similar to TR:Q08050 Q08050
7468	19990		1.19	0.0E+00	AU117553.1	EST_HUMAN	HNF3FH TRANSCRIPTION FACTOR GENESIS ;
7470	19992	32855	3.61	0.0E+00	11427135	NT	AU117553 HEMBA1 Homo sapiens cDNA clone HEMBA1001681 5'
7482	20004	32869	0.68	0.0E+00	AA211663.1	EST_HUMAN	Homo sapiens glucagon-like peptide 2 receptor (GLP2R), mRNA
7488	20011	32877	0.82	0.0E+00	L32832.1	NT	zn5802.r1 Stratagene muscle 937209 Homo sapiens cDNA clone IMAGE:562203 5' similar to gb:X03740
7509	20030	32894	0.98	0.0E+00	BF306996.1	EST_HUMAN	MYOSIN HEAVY CHAIN, SKELETAL MUSCLE (HUMAN);
7509	20030	32895	0.98	0.0E+00	BF306996.1	EST_HUMAN	Homo sapiens zinc finger homeodomain protein (ATBF1-A) mRNA, complete cds
7517	20037	32905	1.48	0.0E+00	AU118767.1	EST_HUMAN	601889923F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4123948 5'
7561	20078	32952	4.53	0.0E+00	AI752561.1	EST_HUMAN	601889923F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4123948 5'
							AU118767 HEMBA1 Homo sapiens cDNA clone HEMBA1004314 5'
							cn17d05.x1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBC_cn17d05 random



Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7661	20078	32853	4.53	0.0E+00	AI752581.1	EST_HUMAN	en17d05.x1 Normal Human Trabecular Bone Cells Homo sapiens cDNA clone NHTBC_cn17d05 random
7631	20143	33023	1.45	0.0E+00	AF064205.1	NT	Homo sapiens dynactin 1 (DCTN1) gene, alternatively spliced products, exons 7 through 32 and complete cds
7631	20143	33024	1.45	0.0E+00	AF064205.1	NT	Homo sapiens dynactin 1 (DCTN1) gene, alternatively spliced products, exons 7 through 32 and complete cds
7639	20151	33035	1.03	0.0E+00	U74315.1	EST_HUMAN	HSU74315 Human chromosome 14 Homo sapiens cDNA clone 1-4
7653	20185	33052	0.97	0.0E+00	BE439545.1	EST_HUMAN	HTM1-183F1 HTM1 Homo sapiens cDNA
7654	20188	33053	1.08	0.0E+00	11417342	NT	Homo sapiens sema domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 5A (SEMA5A), mRNA
7681	20182	33081	2.91	0.0E+00	6912735	NT	Homo sapiens transient receptor potential channel 5 (TRPC5), mRNA
7687	20186	33084	1	0.0E+00	N76126.1	EST_HUMAN	zab6a05.s1 Spores_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:289456 3'
7691	20200	33087	5.28	0.0E+00	BF217905.1	EST_HUMAN	601885465F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4103729 5'
7699	20208	33095	4.27	0.0E+00	AU129822.1	EST_HUMAN	AU129822 NT2RP2 Homo sapiens cDNA clone NT2RP2005913 5'
7716	24789	33111	1.1	0.0E+00	AW069274.1	EST_HUMAN	cr42e09.x1 Jia bone marrow stroma Homo sapiens cDNA clone HBMSC_cr42e09 3'
7716	24789	33112	1.1	0.0E+00	AW069274.1	EST_HUMAN	cr42e09.x1 Jia bone marrow stroma Homo sapiens cDNA clone HBMSC_cr42e09 3'
7718	20226	33114	6.48	0.0E+00	4501848	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABCA3), mRNA
7725	20233	33121	1.01	0.0E+00	AV758487.1	EST_HUMAN	AV758487 BM Homo sapiens cDNA clone BMFBGG05 5'
7726	20234	33122	6.72	0.0E+00	BE739870.1	EST_HUMAN	601593156F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3947365 5'
7726	20234	33123	6.72	0.0E+00	BE739870.1	EST_HUMAN	601593156F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3947365 5'
7727	20235	33124	0.81	0.0E+00	6912461	NT	Homo sapiens atrophin-1 interacting protein 1; activin receptor interacting protein 1 (KIAA0705), mRNA
7727	20235	33125	0.81	0.0E+00	6912461	NT	Homo sapiens atrophin-1 interacting protein 1; activin receptor interacting protein 1 (KIAA0705), mRNA
7728	20236	33126	1.02	0.0E+00	AU120424.1	EST_HUMAN	AU120424 HEMBB1 Homo sapiens cDNA clone HEMBB1000655 5'
7728	20236	33127	1.02	0.0E+00	AU120424.1	EST_HUMAN	AU120424 HEMBB1 Homo sapiens cDNA clone HEMBB1000655 5'
7757	20265	33160	1.73	0.0E+00	BE787610.1	EST_HUMAN	601481713F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3884258 5'
7757	20265	33161	1.73	0.0E+00	BE787610.1	EST_HUMAN	601481713F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3884258 5'
7767	20275	33173	0.8	0.0E+00	AW402189.1	EST_HUMAN	UI-HF-BKO-seq-c-07-0-J1.1 NIH_MGC_36 Homo sapiens cDNA clone IMAGE:3054733 5'
7776	20285	33182	0.9	0.0E+00	AW988044.1	EST_HUMAN	EST380119 MAGC resequences, MAGJ Homo sapiens cDNA
7785	20338	33248	1.97	0.0E+00	AU133187.1	EST_HUMAN	AU133187 NT2RP4 Homo sapiens cDNA clone NT2RP4001507 5'
7840	20382		0.51	0.0E+00	BF217200.1	EST_HUMAN	601885317F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4103693 5'
7853	20395	33300	0.85	0.0E+00	BE313013.1	EST_HUMAN	601150347F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3503050 5'
7864	20408	33313	1.18	0.0E+00	AA149791.1	EST_HUMAN	z01c06.t1 Stratigene colon (#937204) Homo sapiens cDNA clone IMAGE:568410 5'

Table 4  
Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7877	20419	33327	0.8	0.0E+00	BF026628.1	EST_HUMAN	601672310F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3955131 5'
7880	20432	33341	0.51	0.0E+00	AA017021.1	EST_HUMAN	ze33h08.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:360831 5'
7907	20449	33356	2.32	0.0E+00	BE736046.1	EST_HUMAN	601305658F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3639903 5'
7923	20465	33372	3.32	0.0E+00	M34872.1	NT	Human amyloid-beta protein (APP) gene, exon 11
7923	20465	33373	3.32	0.0E+00	M34872.1	NT	Human amyloid-beta protein (APP) gene, exon 11
7953	20495	33404	0.77	0.0E+00	AW674581.1	EST_HUMAN	bb34d02.y1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:2985123 5' similar to TR:O64652 O64652 F17K2.26 PROTEIN ;
7953	20495	33405	0.77	0.0E+00	AW674581.1	EST_HUMAN	bb34d02.y1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:2985123 5' similar to TR:O64652 O64652 F17K2.26 PROTEIN ;
7960	20502	33411	3.05	0.0E+00	AA397551.1	EST_HUMAN	z81b04.r1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:728719 5' similar to TR:G300482 G300482 POL=REVERSE TRANSCRIPTASE HOMOLOG (RETROVIRAL ELEMENT) ;
7962	20504	33412	0.83	0.0E+00	AW987131.1	EST_HUMAN	MR0-ST0031-061099-003-a11 ST0031 Homo sapiens cDNA
7965	20507		0.53	0.0E+00	AB020691.1	NT	Homo sapiens mRNA for KIAA0884 protein, partial cds
7966	20508	33414	7.21	0.0E+00	AU142402.1	EST_HUMAN	AU142402 Y79AA1 Homo sapiens cDNA clone Y79AA1000277 5'
7970	20512	33418	0.97	0.0E+00	BE388421.1	EST_HUMAN	601285550F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3607237 5'
7970	20512	33419	0.97	0.0E+00	BE388421.1	EST_HUMAN	601285550F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3607237 5'
7995	20527	33433	0.52	0.0E+00	7657276	NT	Homo sapiens killer cell immunoglobulin-like receptor, two domains, short cytoplasmic tail, 1 (KIR2DS1), mRNA
7987	20529	33435	0.87	0.0E+00	W95278.1	EST_HUMAN	ze05d01.r1 Soares fetal heart NbHH19W Homo sapiens cDNA clone IMAGE:358081 5'
7987	20529	33436	0.87	0.0E+00	W95278.1	EST_HUMAN	ze05d01.r1 Soares fetal heart NbHH19W Homo sapiens cDNA clone IMAGE:358081 5'
7989	20531		17.03	0.0E+00	BF673096.1	EST_HUMAN	602153008F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4294128 5'
7993	20535		1.38	0.0E+00	AU134114.1	EST_HUMAN	AU134114 OVARC1 Homo sapiens cDNA clone OVARC1001298 5'
8007	20549	33453	2.35	0.0E+00	BF525534.1	EST_HUMAN	602089632F1 NCI_CGAP_Brn64 Homo sapiens cDNA clone IMAGE:4212727 5'
8007	20549	33454	2.35	0.0E+00	BF525534.1	EST_HUMAN	602089632F1 NCI_CGAP_Brn64 Homo sapiens cDNA clone IMAGE:4212727 5'
8037	20579	33484	1.88	0.0E+00	AL120124.1	EST_HUMAN	DKFZp761P092_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761P092 5'
8037	20579	33485	1.88	0.0E+00	AL120124.1	EST_HUMAN	DKFZp761P092_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761P092 5'
8077	20619		1.82	0.0E+00	BE877893.1	EST_HUMAN	601485254F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3887773 5'
8098	20639	33550	2.09	0.0E+00	AW500549.1	EST_HUMAN	UI-HF-BN0-aki-f-01-0-JL.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3077496 5'
8106	20647	33556	11.19	0.0E+00	AW157233.1	EST_HUMAN	au83b08.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2783799 3' similar to TR:O60463 O60463 TYPE-2 PHOSPHATIDIC ACID PHOSPHOHYDROLASE [1];
8123	20664	33574	0.65	0.0E+00	AW072395.1	EST_HUMAN	xe07d12.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2567639 3' similar to contains element OFR repetitive element ;
8141	20682	33594	1.05	0.0E+00	11421722	NT	Homo sapiens centrosomal protein 2 (CEP2), mRNA
8144	20685	33597	0.75	0.0E+00	W01616.1	EST_HUMAN	ze36d05.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:284633 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8148	20887	33599	1.55	0.0E+00	BE745597.1	EST_HUMAN	601578195F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3928998 5'
8148	20887	33600	1.55	0.0E+00	BE745597.1	EST_HUMAN	601578195F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3928998 5'
8158	20699	33613	1.32	0.0E+00	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
8178	20719	33634	0.51	0.0E+00	D45032.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
8198	20739	33651	1.47	0.0E+00	AI387350.1	EST_HUMAN	q95c12.x1 NCI CGAP_U2 Homo sapiens cDNA clone IMAGE:1989334 3' similar to TR:Q14673 Q14673
8211	20752	33668	3.14	0.0E+00	BE674157.1	EST_HUMAN	KIAA0164 PROTEIN.; 7d76a04.x1 NCI CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3278862 3' similar to TR:O85783 O85783
8213	20754	33668	1.31	0.0E+00	AI895671.1	EST_HUMAN	W60b10.x1 NCI CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2429275 3' similar to SW:COGT_HUMAN P50281 MATRIX METALLOPROTEINASE-14 PRECURSOR ;
8224	20765	33682	1.38	0.0E+00	BE563650.1	EST_HUMAN	601334790F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3888655 5'
8224	20765	33683	1.38	0.0E+00	BE563650.1	EST_HUMAN	601334790F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3888655 5'
8231	20772	33692	1.63	0.0E+00	11427235	NT	Homo sapiens Chediak-Higashi syndrome 1 (CHS1), mRNA
8231	20772	33693	1.63	0.0E+00	11427235	NT	Homo sapiens Chediak-Higashi syndrome 1 (CHS1), mRNA
8233	20774	33695	1.7	0.0E+00	AA403192.1	EST_HUMAN	z66f02.r1 Soares_tetral_fetus Nb2HF8_9w Homo sapiens cDNA clone IMAGE:758619 5' similar to TR:G1304132 G1304132 TPRD.;
8233	20774	33696	1.7	0.0E+00	AA403192.1	EST_HUMAN	z66f02.r1 Soares_tetral_fetus Nb2HF8_9w Homo sapiens cDNA clone IMAGE:758619 5' similar to TR:G1304132 G1304132 TPRD.;
8275	20816		4.36	0.0E+00	AA398511.1	EST_HUMAN	z73a08.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:727958 3' similar to gb:S85655 PROHIBITIN (HUMAN);
8283	20824	33745	0.5	0.0E+00	BE837593.1	EST_HUMAN	RC2-FN0094-120600-013-h07 FN0094 Homo sapiens cDNA
8284	20825	33746	1.22	0.0E+00	AW384874.1	EST_HUMAN	QV3-DT0045-221289-046-c07 DT0045 Homo sapiens cDNA
8284	20825	33747	1.22	0.0E+00	AW384874.1	EST_HUMAN	QV3-DT0045-221289-046-c07 DT0045 Homo sapiens cDNA
8303	20844	33766	1.24	0.0E+00	BE612586.1	EST_HUMAN	601452412F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3856179 5'
8303	20844	33767	1.24	0.0E+00	BE612586.1	EST_HUMAN	601452412F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3856179 5'
8318	20859	33784	1.28	0.0E+00	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
8318	20859	33785	1.28	0.0E+00	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
8326	20867	33760	0.78	0.0E+00	AI884477.1	EST_HUMAN	wm33a11.x1 NCI CGAP_U4 Homo sapiens cDNA clone IMAGE:2437724 3' similar to TR:O75457 O75457 CYTOSOLIC PHOSPHOLIPASE A2-GAMMA.;
8333	20874	33786	0.93	0.0E+00	AA502284.1	EST_HUMAN	ne25d10.s1 NCI CGAP_C63 Homo sapiens cDNA clone IMAGE:882259 3' similar to TR:G1136434
8338	20879		0.64	0.0E+00	11416799	NT	G1136434 KIAA0187 PROTEIN.;
8345	20888	33807	1.33	0.0E+00	AI580780.1	EST_HUMAN	Homo sapiens protocadherin beta 3 (PCDH3), mRNA
8348	20889		1.86	0.0E+00	BE890797.1	EST_HUMAN	ta04f11.x1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:2043117 3'
							601431238F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3916569 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8374	20914	33833	0.61	0.0E+00	AW245765.1	EST_HUMAN	2822701.5prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2822701 5'
8374	20914	33834	0.61	0.0E+00	AW245765.1	EST_HUMAN	2822701.5prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2822701 5'
8375	20915	33835	2.27	0.0E+00	4758695	NT	Homo sapiens mitogen-activated protein kinase kinase kinase 13 (MAP3K13), mRNA
8375	20915	33836	2.27	0.0E+00	4758695	NT	Homo sapiens mitogen-activated protein kinase kinase kinase 13 (MAP3K13), mRNA
8375	20918	33838	0.6	0.0E+00	U88084.1	NT	Human zinc finger protein (ZNF165), gene, exons 2 and 3
8376	20918	33839	0.6	0.0E+00	U88084.1	NT	Human zinc finger protein (ZNF165), gene, exons 2 and 3
8443	20983	33898	0.7	0.0E+00	AJ251760.1	NT	Homo sapiens NESP55, GNAS1 antisense (partial) and XlaIphas (partial) genes
8448	20988	33904	3.77	0.0E+00	X98922.1	NT	H. sapiens mRNA for gamma-glutamyltransferase
8448	20988	33905	3.77	0.0E+00	X98922.1	NT	H. sapiens mRNA for gamma-glutamyltransferase
8448	20988	33906	3.77	0.0E+00	X98922.1	NT	H. sapiens mRNA for gamma-glutamyltransferase
8463	21003	33920	1.07	0.0E+00	U82979.1	NT	Human immunoglobulin-like transcript-3 mRNA, complete cds
8502	21041	33962	0.88	0.0E+00	AF022655.1	NT	Homo sapiens cep250 centrosome associated protein mRNA, complete cds
8502	21041	33963	0.88	0.0E+00	AF022655.1	NT	Homo sapiens cep250 centrosome associated protein mRNA, complete cds
8505	21044	33965	0.89	0.0E+00	AU131671.1	EST_HUMAN	AU131671 NT2RP3 Homo sapiens cDNA clone NT2RP3003016 5'
8520	21059	33982	0.6	0.0E+00	11426572	NT	Homo sapiens immunoglobulin superfamily, member 2 (IGSF2), mRNA
8524	21063		1.64	0.0E+00	AW513513.1	EST_HUMAN	x04601.x1 NCI CGAP_U11 Homo sapiens cDNA clone IMAGE:2707032 3' similar to gb:M14123_cds4
8526	21065		0.64	0.0E+00	BE783232.1	EST_HUMAN	RETROVIRUS-RELATED POL POLYPYRROLINE (HUMAN);
8527	21066	33985	16.45	0.0E+00	D52650.1	EST_HUMAN	601472166F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3874912 5'
8557	21086	34017	3.98	0.0E+00	BE378495.1	EST_HUMAN	HUM084C02B Clontech human fetal brain polyA+ mRNA (#8535) Homo sapiens cDNA clone GEN-084C02 5'
8563	21102	34021	2.84	0.0E+00	AA410545.1	EST_HUMAN	601239488F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3808709 5'
8565	21104		2.44	0.0E+00	BF313946.1	EST_HUMAN	Z332804.1 Scores ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:724082 5'
8572	21111	34030	0.85	0.0E+00	11424387	NT	601900571F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4129744 5'
8576	21115	34034	1.26	0.0E+00	AW139673.1	EST_HUMAN	Homo sapiens leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 3 (LILRB3), mRNA
8576	21115	34035	1.26	0.0E+00	AW139673.1	EST_HUMAN	UIH-B11-adr-12-0-UI.s1 NCI CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2717687 3'
8581	21120		0.62	0.0E+00	A1640190.1	EST_HUMAN	UIH-B11-adr-12-0-UI.s1 NCI CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2717687 3'
8600	21139	34053	1.78	0.0E+00	BF377897.1	EST_HUMAN	wa30b10.x1 NCI CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2298579 3' similar to TR:O15044
8608	21147	34063	0.55	0.0E+00	AL163301.2	NT	O15044 KIAA0335 ;
8614	21153	34067	2.14	0.0E+00	BE260272.1	EST_HUMAN	GM1-TN0141-250800-439-b08 TN0141 Homo sapiens cDNA
8619	21158	34071	2.58	0.0E+00	BF700165.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C101
8619	21158	34072	2.58	0.0E+00	BF700165.1	EST_HUMAN	601150051F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3502836 5'
							602127684F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4284542 5'
							602127684F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4284542 5'

Table 4

## Single Exon Probes Expressed In Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8619	21158	34073	2.58	0.0E+00	BF700165.1	EST_HUMAN	602127694F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4284542 5'
8633	21172	34090	0.63	0.0E+00	AI458722.1	EST_HUMAN	tk13h11.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2150949 3'
8660	21189	34117	2.45	0.0E+00	AL449770.1	EST_HUMAN	AL449770 Homo sapiens fetal brain (Stavrides GS) Homo sapiens cDNA
8667	21206	34123	18.43	0.0E+00	AA962527.1	EST_HUMAN	or60g02.e1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1602194 3' similar to gb:M36072.60S
8673	21212	34131	4.67	0.0E+00	10947037	NT	Homo sapiens ankyrin 1, erythrocytic (ANK1), transcript variant 1, mRNA
8673	21212	34132	4.67	0.0E+00	10947037	NT	Homo sapiens ankyrin 1, erythrocytic (ANK1), transcript variant 1, mRNA
8697	21236	34159	1.28	0.0E+00	Y11107.3	NT	Homo sapiens ITGB4 gene for integrin beta 4 subunit, exons 3-41
8699	21238	34161	1.76	0.0E+00	BE278917.1	EST_HUMAN	601156330F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3139734 5'
8708	21247		4.02	0.0E+00	AV718377.1	EST_HUMAN	AV718377 FHTB Homo sapiens cDNA clone FHTBAAF11 5'
8715	21254	34175	3.11	0.0E+00	AW337277.1	EST_HUMAN	xw73.c07.x1 NCI_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2833644 3' similar to gb:X53587
8721	21260	34180	1.42	0.0E+00	AU124051.1	EST_HUMAN	INTEGRIN BETA-4 SUBUNIT PRECURSOR (HUMAN);
8768	21335	34260	0.9	0.0E+00	AU140704.1	EST_HUMAN	AU124051 NT2RM2 Homo sapiens cDNA clone NT2RM2001575 5'
8806	21345	34269	0.54	0.0E+00	AB007923.1	NT	Homo sapiens mRNA for KIAA0454 protein, partial cds
8810	21348	34272	0.8	0.0E+00	R17132.1	EST_HUMAN	yg08609.r1 Soares Infant brain 1N1B Homo sapiens cDNA clone IMAGE:31674 5'
8810	21348	34273	0.6	0.0E+00	R17132.1	EST_HUMAN	yg08609.r1 Soares Infant brain 1N1B Homo sapiens cDNA clone IMAGE:31674 5'
8814	21353	34275	3.85	0.0E+00	AW592233.1	EST_HUMAN	yg08609.r1 Soares Infant brain 1N1B Homo sapiens cDNA clone IMAGE:31674 5'
8814	21353	34276	3.85	0.0E+00	AW592233.1	EST_HUMAN	yg08609.r1 Soares Infant brain 1N1B Homo sapiens cDNA clone IMAGE:31674 5'
8849	21388	34311	0.5	0.0E+00	AU128804.1	EST_HUMAN	hf48a09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2935086 3'
8859	21388	34321	1.27	0.0E+00	AV714764.1	EST_HUMAN	hf48a09.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2935086 3'
8874	21413	34335	2.6	0.0E+00	AL040428.1	EST_HUMAN	AU128804 NT2RP2 Homo sapiens cDNA clone NT2RP2004245 5'
8874	21413	34336	2.6	0.0E+00	AL040428.1	EST_HUMAN	AV714764 DCB Homo sapiens cDNA clone DCBAUA06 5'
8880	21418	34342	1.55	0.0E+00	AF133901.1	NT	DKFZp434C1814_s1 434 (synonym: hhes3) Homo sapiens cDNA clone DKFZp434C1814 3'
8892	21420	34345	1.68	0.0E+00	AB040945.1	NT	DKFZp434C1814_s1 434 (synonym: hhes3) Homo sapiens cDNA clone DKFZp434C1814 3'
8899	21427	34352	0.54	0.0E+00	BF675505.1	EST_HUMAN	Homo sapiens killer inhibitory receptor 2-2-1 (KIR221) and killer inhibitory receptor 2-2-2 (KIR222) genes, partial cds
8891	21429		0.97	0.0E+00	BF058289.1	EST_HUMAN	Homo sapiens mRNA for KIAA1512 protein, partial cds
8921	21459	34377	6.2	0.0E+00	11422857	NT	Homo sapiens mRNA for KIAA1512 protein, partial cds
8930	21468	34386	1.15	0.0E+00	K01241.1	NT	602138483F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4274708 5'
8937	21475	34395	4.14	0.0E+00	AB020630.1	NT	7k28b03.x1 NCI_CGAP_Ov18 Homo sapiens cDNA clone IMAGE:3476692 3' similar to TR:O38448 O38448
8937	21475	34396	4.14	0.0E+00	AB020630.1	NT	\$ GAG :
8942	21480	34402	1.61	0.0E+00	AV660739.1	EST_HUMAN	Homo sapiens tumor protein p73 (TP73), mRNA

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8948	21486	34408	3.39	0.0E+00	7706638	NT	Homo sapiens polycystin-L (PKDL), mRNA
8953	21491	34413	2.58	0.0E+00	BE793326.1	EST_HUMAN	601588304F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3942553 5'
8954	21492	34414	0.58	0.0E+00	AB033077.1	NT	Homo sapiens mRNA for KIAA1251 protein, partial cds
8954	21492	34415	0.58	0.0E+00	AB033077.1	NT	Homo sapiens mRNA for KIAA1251 protein, partial cds
8956	21504		1.07	0.0E+00	H73937.1	EST_HUMAN	yJ03h08.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:232767 5'
8976	21514	34437	4.52	0.0E+00	BE315402.1	EST_HUMAN	601141119F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3140740 5'
8976	21514	34438	4.52	0.0E+00	BE315402.1	EST_HUMAN	601141119F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3140740 5'
8986	21524	34453	0.63	0.0E+00	BE612721.1	EST_HUMAN	601452582F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3858100 5'
8986	21524	34454	0.63	0.0E+00	BE612721.1	EST_HUMAN	601452582F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3858100 5'
8989	21527		0.58	0.0E+00	M89986.1	NT	Human polymorphic loci in Xq28
8991	21529	34458	1.84	0.0E+00	X14766.1	NT	Human mRNA for GABA-A receptor, alpha 1 subunit
9011	21548	34477	2.5	0.0E+00	A081395.1	EST_HUMAN	an28604.x1 Gessler Wilms tumor Homo sapiens cDNA clone IMAGE:1700094 3'
9016	21553	34481	1.82	0.0E+00	A654607.1	EST_HUMAN	wq34a12.x1 NCI CGAP GC8 Homo sapiens cDNA clone IMAGE:2473150 3' similar to SW:MGB3_HUMAN
9021	21558	34486	4.57	0.0E+00	9256595	NT	O15480 MELANOMA-ASSOCIATED ANTIGEN B3 ;
9031	21568	34497	2.1	0.0E+00	AW958311.1	EST_HUMAN	Homo sapiens protocadherin alpha 8 (PCDH8), mRNA
9041	21578	34507	2.81	0.0E+00	9835487	NT	Human endogenous retrovirus, complete genome
9056	21593	34523	1.13	0.0E+00	AU142662.1	EST_HUMAN	AU142662 Y79AA1 Homo sapiens cDNA clone Y79AA1000878 5'
9070	21607	34538	1.25	0.0E+00	11436895	NT	Homo sapiens MAP-kinase activating death domain (MADD), mRNA
9071	21608		0.9	0.0E+00	BE410768.1	EST_HUMAN	601301676F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3636163 5'
9085	21621	34557	1.69	0.0E+00	BF002024.1	EST_HUMAN	7997H12.x1 NCI CGAP Co16 Homo sapiens cDNA clone IMAGE:3314471 3' similar to TR:Q9UH62
9098	21635	34573	0.83	0.0E+00	AB011150.1	NT	Q9UH62 HYPOTHETICAL 42.5 KD PROTEIN ;
9100	21636	34574	7.17	0.0E+00	BE794823.1	EST_HUMAN	Homo sapiens mRNA for KIAA0578 protein, partial cds
9104	21640	34579	0.52	0.0E+00	BE810292.1	EST_HUMAN	601589294F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943463 5'
9104	21640	34580	0.52	0.0E+00	BE810292.1	EST_HUMAN	RC3-PT0151-290600-011-c05 PT0151 Homo sapiens cDNA
9107	21643	34583	1.17	0.0E+00	AU136229.1	EST_HUMAN	RC3-PT0151-290600-011-c05 PT0151 Homo sapiens cDNA
9112	21648	34598	1.18	0.0E+00	BE863843.1	EST_HUMAN	AU136229 PLACE1 Homo sapiens cDNA clone PLACE1003804 5'
9112	21648	34599	1.18	0.0E+00	BE863843.1	EST_HUMAN	AU136229 PLACE1 Homo sapiens cDNA clone PLACE1003804 5'
9130	21665	34605	0.79	0.0E+00	AB011198.1	NT	601510247F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3911986 5'
9133	21668	34609	1.84	0.0E+00	AA344601.1	EST_HUMAN	601510247F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3911986 5'
9133	21668	34610	1.64	0.0E+00	AA344601.1	EST_HUMAN	Homo sapiens mRNA for KIAA0594 protein, partial cds
						EST_HUMAN	EST50505 Gall bladder 1 Homo sapiens cDNA 5' end
						EST_HUMAN	EST50505 Gall bladder 1 Homo sapiens cDNA 5' end
9188	21705	34647	0.85	0.0E+00	AW673469.1	EST_HUMAN	ba54d08.y3 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:2900367 5' similar to TR:O60275 O60275 KIAA0522 PROTEIN ;

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9189	21705	34648	0.85	0.0E+00	AW673469.1	EST_HUMAN	ba54d08.y3 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:2900387 5' similar to TR:O60275 O60275 KIAA0522 PROTEIN ;
9222	21738	34680	3.48	0.0E+00	BE207063.1	EST_HUMAN	ba09f05.y1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2823873 5' similar to gb:L35048 Mus musculus Bcl-xL mRNA, complete cds (MOUSE);
9222	21738	34681	3.48	0.0E+00	BE207063.1	EST_HUMAN	ba09f05.y1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2823873 5' similar to gb:L35048 Mus musculus Bcl-xL mRNA, complete cds (MOUSE);
9233	21855	34904	2.35	0.0E+00	BF348013.1	EST_HUMAN	QV2-HT0688-250700-282-b08 HT0688 Homo sapiens cDNA
9288	21794	34743	2.8	0.0E+00	BE712515.1	EST_HUMAN	601455118F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3859035 5'
9288	21899	34846	0.98	0.0E+00	BF034377.1	EST_HUMAN	601455118F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3859035 5'
9288	21898	34847	0.98	0.0E+00	BF034377.1	EST_HUMAN	601455118F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3859035 5'
9305	21805	34854	0.53	0.0E+00	A1906351.1	EST_HUMAN	RC-BT108-O40399-032 BT108 Homo sapiens cDNA
9308	21808	34856	1.54	0.0E+00	5803069	NT	Homo sapiens leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 5 (LILRB5), mRNA
9308	21808	34857	1.54	0.0E+00	5803069	NT	Homo sapiens leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 5 (LILRB5), mRNA
9317	21831	34782	1.98	0.0E+00	AL042278.1	EST_HUMAN	DKFZp434L0120_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434L0120 5'
9352	21866	34816	2.17	0.0E+00	A1088043.1	EST_HUMAN	ow60h01.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:1651249 3' similar to TR:Q14877 Q14877 KIAA0171 PROTEIN ;
9359	20298	33196	0.93	0.0E+00	BF309862.1	EST_HUMAN	601892245F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4138088 5'
9361	20300	33189	2.28	0.0E+00	11560151	NT	Homo sapiens hypothetical C2H2 zinc finger protein FLJ22504 (FLJ22504), mRNA
9361	20300	33200	2.28	0.0E+00	11560151	NT	Homo sapiens hypothetical C2H2 zinc finger protein FLJ22504 (FLJ22504), mRNA
9363	20302	33203	18.79	0.0E+00	A1290909.1	EST_HUMAN	qm09a06.x1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1881298 3' similar to SW:RL2B_HUMAN
9363	20302	33204	18.79	0.0E+00	A1290909.1	EST_HUMAN	qm09a06.x1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1881298 3' similar to SW:RL2B_HUMAN
9364	20303	33205	6.56	0.0E+00	AW953836.1	EST_HUMAN	P29316 60S RIBOSOMAL PROTEIN L23A ;
9391	21814	34763	3.79	0.0E+00	AF153466.1	NT	EST366028 MAGC resequences, MAGC Homo sapiens cDNA
9394	21817	34767	0.81	0.0E+00	BE885128.1	EST_HUMAN	Homo sapiens polycystic kidney disease 2-like protein (PKD2L) gene, exon 8
9394	21817	34768	0.81	0.0E+00	BE885128.1	EST_HUMAN	601510882F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3912165 5'
9403	21812		18.73	0.0E+00	BE255829.1	EST_HUMAN	601510882F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3912165 5'
9408	21815	34864	1.36	0.0E+00	BE781382.1	EST_HUMAN	601109942F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3350722 5'
9408	21815	34865	1.36	0.0E+00	BE781382.1	EST_HUMAN	601466828F1 NIH_MGC_87 Homo sapiens cDNA clone IMAGE:3870007 5'
9408	21817	34866	29.88	0.0E+00	AW163779.1	EST_HUMAN	601466828F1 NIH_MGC_87 Homo sapiens cDNA clone IMAGE:3870007 5'
							au86c04.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2783142 5' similar to gb:M36072 60S RIBOSOMAL PROTEIN L7A (HUMAN);

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9428	21937	34886	3	0.0E+00	BE263191.1	EST_HUMAN	601145054F2 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3160477 5'
9446	21972	34922	4.5	0.0E+00	C06158.1	EST_HUMAN	C06158 Human pancreatic islet Homo sapiens cDNA clone hbc5805
9446	21972	34923	4.5	0.0E+00	C06158.1	EST_HUMAN	C06158 Human pancreatic islet Homo sapiens cDNA clone hbc5805
9448	21974	34926	2.7	0.0E+00	BE746215.1	EST_HUMAN	60157883F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3927548 5'
9458	21984	34936	2.92	0.0E+00	11437282	NT	Homo sapiens solute carrier family 21 (organic anion transporter), member 9 (SLC21A9), mRNA
9458	21984	34937	2.92	0.0E+00	11437282	NT	Homo sapiens solute carrier family 21 (organic anion transporter), member 9 (SLC21A9), mRNA
9458	21984	34938	2.92	0.0E+00	11437282	NT	Homo sapiens solute carrier family 21 (organic anion transporter), member 9 (SLC21A9), mRNA
9478	21877	34824	1.89	0.0E+00	BE000549.1	EST_HUMAN	601673425F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3956238 5'
9496	21996	34952	0.76	0.0E+00	AV701829.1	EST_HUMAN	AV701829 ADB Homo sapiens cDNA clone ADBBYH01 5'
9508	22008	34965	2.38	0.0E+00	AF019084.1	NT	Homo sapiens keratin 2e (KRT2E) gene, complete cds
9508	22008	34966	2.38	0.0E+00	AF019084.1	NT	Homo sapiens keratin 2e (KRT2E) gene, complete cds
9540	22040	35001	1.32	0.0E+00	BE082977.1	EST_HUMAN	RC2-BT0642-130300-017-g01 BT0642 Homo sapiens cDNA
9559	22059	35021	1.86	0.0E+00	AW500293.1	EST_HUMAN	UI-HF-BND-akg-b-12-0-J1.1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3076943 5'
9559	22059	35022	1.86	0.0E+00	AW500293.1	EST_HUMAN	UI-HF-BND-akg-b-12-0-J1.1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3076943 5'
9568	22068	35028	1.75	0.0E+00	AF028308.1	NT	Homo sapiens chromosome 9 duplication of the T cell receptor beta locus and trypsinogen gene families
9568	22068	35029	1.75	0.0E+00	AF028308.1	NT	Homo sapiens chromosome 9 duplication of the T cell receptor beta locus and trypsinogen gene families
9570	22070	35030	0.72	0.0E+00	BE783272.1	EST_HUMAN	601470824F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3874037 5'
9570	22070	35031	0.72	0.0E+00	BE783272.1	EST_HUMAN	601470824F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3874037 5'
9579	22079	35043	1.14	0.0E+00	W56629.1	EST_HUMAN	zdf6e11.1 Sceres_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:340844 5'
9579	22079	35044	1.14	0.0E+00	W56629.1	EST_HUMAN	zdf6e11.1 Sceres_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:340844 5'
9581	22091	35055	1.05	0.0E+00	AB035356.1	NT	Homo sapiens mRNA for neurexin I-alpha protein, complete cds
9595	22095		0.64	0.0E+00	A1124780.1	EST_HUMAN	am56a11.x1 Johnston frontal cortex Homo sapiens cDNA clone IMAGE:1539548 3'
9597	22097	35060	2.65	0.0E+00	AW500528.1	EST_HUMAN	UI-HF-BND-akg-c-07-0-J1.1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3077364 5'
9640	22140	35107	1.46	0.0E+00	AF009688.1	NT	Multiple sclerosis associated retrovirus polyprotein (pol) mRNA, partial cds
9666	22165	35138	2.21	0.0E+00	S78486.1	NT	AIGF=androgen-induced growth factor AIGF [human, placenta, Genomic/mRNA, 498 nt, segment 5 of 5]
9666	22165	35139	2.21	0.0E+00	S78486.1	NT	AIGF=androgen-induced growth factor AIGF [human, placenta, Genomic/mRNA, 498 nt, segment 5 of 5]
9669	22168	35144	2.54	0.0E+00	BE56320.1	EST_HUMAN	601334603F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3688680 5'
9689	22188	35161	1.5	0.0E+00	AW363135.1	EST_HUMAN	CM2-CT0311-301199-043-h11 CT0311 Homo sapiens cDNA
9708	22206	35179	0.91	0.0E+00	11436432	NT	Homo sapiens multimerin (MMRN), mRNA



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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9709	22207	35180	0.74	0.0E+00	11424387	NT	Homo sapiens leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 3 (LILRB3), mRNA
9718	22216	35190	0.83	0.0E+00	BE206710.1	EST_HUMAN	bb26c01.x1 NIH_MGC_5 Homo sapiens cDNA clone IMAGE:2664000 3'
9733	22231	35208	2.41	0.0E+00	AU132349.1	EST_HUMAN	AU132349 NT2RP3 Homo sapiens cDNA clone NT2RP3004260 5'
9733	22231	35209	2.41	0.0E+00	AU132349.1	EST_HUMAN	AU132349 NT2RP3 Homo sapiens cDNA clone NT2RP3004260 5'
9742	22240	35221	1.45	0.0E+00	AW500936.1	EST_HUMAN	UJHF-8P0p-att-05-0-UJ.r1 NIH_MGC_51 Homo sapiens cDNA clone IMAGE:3072897 5'
9748	22246	35227	19.66	0.0E+00	BE740490.1	EST_HUMAN	601595558F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3949383 5'
9748	22246	35228	19.66	0.0E+00	BE740490.1	EST_HUMAN	601595558F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3949383 5'
9781	22259	35242	2.32	0.0E+00	7662067	NT	Homo sapiens KIAA0345 gene product (KIAA0345), mRNA
9779	22271	35262	1.98	0.0E+00	AL042278.1	EST_HUMAN	DKFZp434L0120_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434L0120 5'
9784	22282	35268	0.71	0.0E+00	AL041084.2	EST_HUMAN	DKFZp434B2416_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434B2416 5'
9794	22292	35275	2.32	0.0E+00	AU132349.1	EST_HUMAN	AU132349 NT2RP3 Homo sapiens cDNA clone NT2RP3004260 5'
9795	22293	35276	2.48	0.0E+00	AF152308.1	NT	Homo sapiens protocadherin alpha 12 (PCDH-alpha12) mRNA, complete cds
9822	22320	35304	2.61	0.0E+00	AF009220.1	NT	Homo sapiens leukocyte immunoglobulin-like receptor-1 mRNA, complete cds
9822	22320	35305	2.61	0.0E+00	AF009220.1	NT	Homo sapiens leukocyte immunoglobulin-like receptor-1 mRNA, complete cds
9838	22336	35318	3.23	0.0E+00	BF092898.1	EST_HUMAN	MR4-TN0114-110900-101-e04 TN0114 Homo sapiens cDNA
9865	22382	35342	2.74	0.0E+00	BE280793.1	EST_HUMAN	601155227F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3138798 5'
9874	22371	35348	8.19	0.0E+00	BE388700.1	EST_HUMAN	601286351F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3613045 5'
9874	22371	35349	8.19	0.0E+00	BE388700.1	EST_HUMAN	601286351F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3613045 5'
9883	22380	35355	9.02	0.0E+00	AW236268.1	EST_HUMAN	xn72b01.x1 NCI CGAP_CML1 Homo sapiens cDNA clone IMAGE:2699977 3' similar to gb:X02152_cds1 L-LACTATE DEHYDROGENASE M CHAIN (HUMAN);
9884	22381	35356	0.92	0.0E+00	AA341305.1	EST_HUMAN	EST46740 Fetal kidney II Homo sapiens cDNA 5' end
9893	22390	35366	0.5	0.0E+00	11427235	NT	Homo sapiens Chediak-Higashi syndrome 1 (CHS1), mRNA
9916	22412	35387	0.78	0.0E+00	AW984113.1	EST_HUMAN	EST376186 MAGC resequences, MAGH Homo sapiens cDNA
9929	22425	35398	6.82	0.0E+00	AU143873.1	EST_HUMAN	AU143873 Y79AA1 Homo sapiens cDNA clone Y79AA1002307 5'
9929	22425	35399	6.82	0.0E+00	AU143873.1	EST_HUMAN	AU143873 Y79AA1 Homo sapiens cDNA clone Y79AA1002307 5'
9932	22428	35402	3.44	0.0E+00	AF072408.1	NT	Homo sapiens killer cell inhibitory receptor KIRCI gene, exons 2, 3, and 4
9935	22430	35404	2.52	0.0E+00	11421001	NT	Homo sapiens HEF like Protein (HEFL), mRNA
9935	22430	35405	2.52	0.0E+00	11421001	NT	Homo sapiens HEF like Protein (HEFL), mRNA
9968	22463	35447	3.55	0.0E+00	AU136637.1	EST_HUMAN	AU136637 PLACE1 Homo sapiens cDNA clone PLACE1004737 5'
9968	22463	35448	3.55	0.0E+00	AU136637.1	EST_HUMAN	AU136637 PLACE1 Homo sapiens cDNA clone PLACE1004737 5'
9984	22479	35462	2.1	0.0E+00	AJ295844.1	NT	Homo sapiens partial RANBP7 gene for RanBP7/importin7 and partial ZNF143 gene
9984	22479	35463	2.1	0.0E+00	AJ295844.1	NT	Homo sapiens partial RANBP7 gene for RanBP7/importin7 and partial ZNF143 gene
9989	22484	35470	0.92	0.0E+00	AV695712.1	EST_HUMAN	AV695712 GKX Homo sapiens cDNA clone GKDXA07 5'

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9086	22484	35471	0.92	0.0E+00	AV695712.1	EST_HUMAN	AV695712 GKCC Homo sapiens cDNA clone GKCDXA07 5'
9995	22490	35478	0.57	0.0E+00	AF072408.1	NT	Homo sapiens killer cell inhibitory receptor KIRCI gene, exons 2, 3, and 4
9997	22492	35481	2.78	0.0E+00	AA196387.1	EST_HUMAN	z97h11.1.r1 Stratagene muscle 937209 Homo sapiens cDNA clone IMAGE:628197 5'
10020	22515	35508	1.61	0.0E+00	AA131248.1	EST_HUMAN	z31f01.1.r1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:503545 5'
10020	22515	35509	1.61	0.0E+00	AA131248.1	EST_HUMAN	z31f01.1.r1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:503545 5'
10061	22556	35551	1.56	0.0E+00	AF179308.1	NT	Homo sapiens KIF4 (KIF4) mRNA, complete cds
10102	22597	35590	0.75	0.0E+00	BE880658.1	EST_HUMAN	601491565F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3893657 5'
10113	22608	35598	11.65	0.0E+00	BE730772.1	EST_HUMAN	601570712F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3845403 5'
10113	22608	35599	11.65	0.0E+00	BE730772.1	EST_HUMAN	601570712F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3845403 5'
10118	22613	35603	1.05	0.0E+00	AU127403.1	EST_HUMAN	AU127403 NT2RP2 Homo sapiens cDNA clone NT2RP2001212 5'
10127	22622	35612	0.99	0.0E+00	BE958511.1	EST_HUMAN	601845134F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:3930177 5'
10127	22622	35613	0.99	0.0E+00	BE958511.1	EST_HUMAN	601845134F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:3930177 5'
10142	22637	35628	0.79	0.0E+00	BE897487.1	EST_HUMAN	601432317F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3917453 5'
10153	22648	35642	0.78	0.0E+00	AA311624.1	EST_HUMAN	EST182353 Jurkat T-cells VI Homo sapiens cDNA 5' end
10154	22649	35643	0.57	0.0E+00	4758827	NT	Homo sapiens neurexin III (NRXN3) mRNA
10167	22662	35657	0.81	0.0E+00	BE891113.1	EST_HUMAN	601432228F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3917598 5'
10170	22665	35660	1.29	0.0E+00	11580151	NT	Homo sapiens hypothetical C2H2 zinc finger protein FLJ22504 (FLJ22504), mRNA
10179	22674	35666	1.47	0.0E+00	AB029280.1	NT	Homo sapiens mRNA for actin binding protein ABP620, complete cds
10180	22675	35667	0.53	0.0E+00	BE304522.1	EST_HUMAN	601105459F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2987918 5'
10180	22675	35668	0.53	0.0E+00	BE304522.1	EST_HUMAN	601105459F1 NIH_MGC_15 Homo sapiens cDNA clone IMAGE:2987918 5'
10187	22682	35673	6.03	0.0E+00	AB006590.1	NT	Homo sapiens mRNA for estrogen receptor beta, complete cds
10187	22682	35674	6.03	0.0E+00	AB006590.1	NT	Homo sapiens mRNA for estrogen receptor beta, complete cds
10194	22689	35682	0.57	0.0E+00	AA194770.1	EST_HUMAN	zq06h11.1.r1 Stratagene muscle 937209 Homo sapiens cDNA clone IMAGE:628965 5' similar to TR:G407097
10196	22691	35684	1.18	0.0E+00	AA704457.1	EST_HUMAN	G407097 185KD PROTEIN.
10198	22693	35685	1.31	0.0E+00	M22921.1	NT	z19b06.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:450707 3' similar to gb:U14123_cds1 RETROVIRUS-RELATED GAG POLYPROTEIN (HUMAN);
10200	22695	35688	5.5	0.0E+00	BF340331.1	EST_HUMAN	Human beta 1.4-galactosyl-transferase mRNA, complete cds
10200	22695	35689	5.5	0.0E+00	BF340331.1	EST_HUMAN	602037045F1 NCI CGAP_Bm64 Homo sapiens cDNA clone IMAGE:4184939 5'
10227	22722	35713	0.93	0.0E+00	BE897149.1	EST_HUMAN	602037045F1 NCI CGAP_Bm64 Homo sapiens cDNA clone IMAGE:4184939 5'
10227	22722	35714	0.93	0.0E+00	BE897149.1	EST_HUMAN	601439713F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3924578 5'
10256	22751	35739	0.53	0.0E+00	AV716271.1	EST_HUMAN	601439713F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3924578 5'
10256	22751	35740	0.53	0.0E+00	AV716271.1	EST_HUMAN	AV716271 DCB Homo sapiens cDNA clone DCBDC09 5'

Table 4

## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10285	22780	35770	0.77	0.0E+00	AI631818.1	EST_HUMAN	wa36e03.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2300188 3' similar to TR:Q61204
10285	22780	35771	0.77	0.0E+00	AI631818.1	EST_HUMAN	Q61204 NOTCH2-LIKE ;
10288	22782	35782	1.32	0.0E+00	T03078.1	EST_HUMAN	wa36e03.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2300188 3' similar to TR:Q61204
10321	22815	35811	0.83	0.0E+00	AU122429.1	EST_HUMAN	Q61204 NOTCH2-LIKE ;
10348	22842	35838	2.69	0.0E+00	BF436218.1	EST_HUMAN	FB23A4 Fetal brain, Stratagene Homo sapiens cDNA clone FB23A4 3'end
10348	22843		1.61	0.0E+00	AV654765.1	EST_HUMAN	AU122429 MAMMA1 Homo sapiens cDNA clone MAMMA1002368 5'
10367	22861	35854	3.53	0.0E+00	AW517960.1	EST_HUMAN	hab45e12.x1 Soares_NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3265271 3'
10371	22865	35858	21.07	0.0E+00	BE549213.1	EST_HUMAN	AV654765 GLC Homo sapiens cDNA clone GLCZC07 3'
10386	22880	35874	0.55	0.0E+00	11436005	NT	xu74b01.x1 NCI_CGAP_Kid8 Homo sapiens cDNA clone IMAGE:2807401 3' similar to gb:M69068 MOESIN (HUMAN);
10410	22804	35901	1.22	0.0E+00	X89893.1	NT	601078784F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3464703 5'
10411	22805	35902	3	0.0E+00	BE781742.1	EST_HUMAN	Homo sapiens hypothetical protein DKFZp781P1010 (DKFZp781P1010), mRNA
10430	22824	35929	2.88	0.0E+00	BE082720.1	EST_HUMAN	H sapiens mRNA for NK receptor (183 Act1)
10430	22824	35930	2.88	0.0E+00	BE082720.1	EST_HUMAN	601467419F1 NIH_MGC_87 Homo sapiens cDNA clone IMAGE:3870700 5'
10437	22831	35938	0.6	0.0E+00	Y08032.1	NT	RC2-BT0642-150200-012-403 BT0642 Homo sapiens cDNA
10443	22837	35947	0.68	0.0E+00	AI658890.1	EST_HUMAN	RC2-BT0642-150200-012-403 BT0642 Homo sapiens cDNA
10450	22844	35954	5.46	0.0E+00	BE743215.1	EST_HUMAN	Human endogenous retrovirus-K, LTR U5 and gag gene
10450	22844	35955	5.46	0.0E+00	BE743215.1	EST_HUMAN	IB54e07.x1 NCI_CGAP_G08 Homo sapiens cDNA clone IMAGE:2244812 3'
10453	22847	35956	1.83	0.0E+00	BE617655.1	EST_HUMAN	601573895F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3835188 5'
10453	22847	35957	1.83	0.0E+00	BE617655.1	EST_HUMAN	601573895F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3835188 5'
10458	22952	35960	0.49	0.0E+00	D29854.1	NT	601441723T1 NIH_MGC_85 Homo sapiens cDNA clone IMAGE:3845958 3'
10458	22952	35961	0.49	0.0E+00	D29854.1	NT	601441723T1 NIH_MGC_85 Homo sapiens cDNA clone IMAGE:3845958 3'
10474	22968	35977	0.68	0.0E+00	H39805.1	EST_HUMAN	Human mRNA for KIAA0056 gene, partial cds
10487	22981	35989	0.46	0.0E+00	AW748117.1	EST_HUMAN	Human mRNA for KIAA0056 gene, partial cds
10488	22990	35999	1.14	0.0E+00	D87875.1	NT	Human mRNA for KIAA0056 gene, partial cds
10508	23002	36010	0.8	0.0E+00	D29854.1	NT	Human mRNA for KIAA0056 gene, partial cds
10515	23053	36064	2.76	0.0E+00	AV711075.1	EST_HUMAN	Human mRNA for KIAA0056 gene, complete cds
10515	23053	36065	2.76	0.0E+00	AV711075.1	EST_HUMAN	AV711075 Cu Homo sapiens cDNA clone CUAAG05 5'
10517	23055		6.05	0.0E+00	AW813783.1	EST_HUMAN	AV711075 Cu Homo sapiens cDNA clone CUAAG05 5'
10525	23062	36073	7.48	0.0E+00	AW963563.1	EST_HUMAN	RC3-ST0197-120200-015-g03 ST0197 Homo sapiens cDNA
10538	23075	36088	1.91	0.0E+00	11431124	NT	EST375638 MAGE repeat sequences, MAGE Homo sapiens cDNA
10538	23075	36089	1.91	0.0E+00	11431124	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABCA3), mRNA
10538	23075	36089	1.91	0.0E+00	11431124	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABCA3), mRNA

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10540	23077	36091	1.82	0.0E+00	AW057621.1	EST_HUMAN	wy61f09.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2553065 3' similar to TR:Q60568 Q60566 VDX;
10549	23085	36099	2.26	0.0E+00	BE243270.1	EST_HUMAN	TCAAP3D0917 Pediatric acute myelogenous leukemia cell (FAB M1) Baylor-HGSC project=TCAA Homo sapiens cDNA clone TCAAP0917
10550	23086	36100	2.73	0.0E+00	AI652239.1	EST_HUMAN	wb28a12.x1 NCL_CGAP_G06 Homo sapiens cDNA clone IMAGE:2306974 3' similar to contains element MSR1 MSR1 repetitive element;
10550	23086	36101	2.73	0.0E+00	AI652239.1	EST_HUMAN	wb28a12.x1 NCL_CGAP_G06 Homo sapiens cDNA clone IMAGE:2306974 3' similar to contains element MSR1 MSR1 repetitive element;
10561	23097	36110	4.31	0.0E+00	11545911	NT	Homo sapiens NOD2 protein (NOD2), mRNA
10561	23097	36111	4.31	0.0E+00	11545911	NT	Homo sapiens NOD2 protein (NOD2), mRNA
10576	23111	36124	1.98	0.0E+00	AW 404795.1	EST_HUMAN	UI-HF-BL0-acm-4-04-0-UJ.r1 NIH_MGC_37 Homo sapiens cDNA clone IMAGE:3059383 5'
10580	23115	36129	5.92	0.0E+00	11424829	NT	Homo sapiens hypothetical protein FLJ20079 (FLJ20079), mRNA
10581	23116	36130	10.05	0.0E+00	4504536	NT	Homo sapiens 5-hydroxytryptamine (serotonin) receptor 1E (HTR1E), mRNA
10581	23116	36131	10.05	0.0E+00	4504536	NT	Homo sapiens 5-hydroxytryptamine (serotonin) receptor 1E (HTR1E), mRNA
10582	23117	36132	2.9	0.0E+00	AI691827.1	EST_HUMAN	wu32b06.x1 Soares Dieckgrafe_colon_NHGD Homo sapiens cDNA clone IMAGE:2521715 3'
10585	23120	36136	2.57	0.0E+00	BE882109.1	EST_HUMAN	601505204F2 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3908865 5'
10589	23124	36138	15.86	0.0E+00	BE891630.1	EST_HUMAN	601434522F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3919636 5'
10591	23126	36139	2.44	0.0E+00	8923839	NT	Homo sapiens myosin, heavy polypeptide 2, skeletal muscle, adult (MYH2), mRNA
10591	23126	36140	2.44	0.0E+00	8923839	NT	Homo sapiens myosin, heavy polypeptide 2, skeletal muscle, adult (MYH2), mRNA
10606	23140	36152	6.94	0.0E+00	BE903304.1	EST_HUMAN	601674332F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3957343 5'
10609	18572	31304	2.31	0.0E+00	AA195905.1	EST_HUMAN	zp95b11.r1 Stralagene muscle 937209 Homo sapiens cDNA clone IMAGE:627833 5' similar to gb:X03740
10630	23162	36174	1.99	0.0E+00	AA809080.1	EST_HUMAN	MYOSIN HEAVY CHAIN, SKELETAL MUSCLE (HUMAN);
10632	23164	36176	5.44	0.0E+00	BE793498.1	EST_HUMAN	nm17c08.s1 NCL_CGAP_GCB0 Homo sapiens cDNA clone IMAGE:1240718 3' similar to gb:X57809 IG
10640	23172	36183	19.41	0.0E+00	AV727362.1	EST_HUMAN	LAMBDA CHAIN C REGIONS (HUMAN);
10640	23172	36184	19.41	0.0E+00	AV727362.1	EST_HUMAN	601588829F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943015 5'
10654	23186	36202	18.4	0.0E+00	AW 516055.1	EST_HUMAN	AV727362 HTC Homo sapiens cDNA clone HTCAQH06 5'
10660	23192	36207	3.16	0.0E+00	AU135741.1	EST_HUMAN	xy04g10.x1 NCL_CGAP_Lym12 Homo sapiens cDNA clone IMAGE:2852226 3' similar to gb:M60854 40S
10665	23197	36210	2.88	0.0E+00	AW 593333.1	EST_HUMAN	RIBOSOMAL PROTEIN S16 (HUMAN);
10665	23197	36211	2.88	0.0E+00	AW 593333.1	EST_HUMAN	AU135741 PLACE1 Homo sapiens cDNA clone PLACE1002794 5'
10665	23197	36211	2.88	0.0E+00	AW 593333.1	EST_HUMAN	hg13d02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2945475 3' similar to contains element MSR1 repetitive element;
10665	23197	36211	2.88	0.0E+00	AW 593333.1	EST_HUMAN	hg13d02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2945475 3' similar to contains element MSR1 repetitive element;

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## Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10665	23187	36212	2.88	0.0E+00	AW593333.1	EST_HUMAN	hg13d02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2845475 3' similar to contains element MSR1 repetitive element ;
10667	23199	36213	1.99	0.0E+00	Z34897.1	NT	H. sapiens mRNA for H1 histamine receptor
10668	23200	36214	3.18	0.0E+00	F13069.1	EST_HUMAN	HSC3IC031 normalized infant brain cDNA Homo sapiens cDNA clone c-3ic03
10676	23208	36220	3.91	0.0E+00	D10083.1	NT	Homo sapiens RGH1 gene, retrovirus-like element
10678	23211	36222	33.46	0.0E+00	11425570	NT	Homo sapiens ryanodine receptor 1 (skeletal) (RyR1), mRNA
10695	23225	36239	3.59	0.0E+00	AW338094.1	EST_HUMAN	xw6601.x1 NCL_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2832985 3' similar to gb:X17115 IG MU CHAIN C REGION (HUMAN);
10696	23226	36240	5.84	0.0E+00	AW451230.1	EST_HUMAN	UI-H-B13-eth-a-01-0-J1.s1 NCL_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:2736649 3'
10696	23226	36241	5.84	0.0E+00	AW451230.1	EST_HUMAN	UI-H-B13-eth-a-01-0-J1.s1 NCL_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:2736649 3'
10699	12891			0.0E+00	4506632	NT	Homo sapiens ribosomal protein L31 (RPL31) mRNA
10701	23230	36243	2.17	0.0E+00	AB014567.1	NT	Homo sapiens mRNA for KIAA0687 protein, partial cds
10714	23242	36259	2.26	0.0E+00	BE298449.1	EST_HUMAN	601119248F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3029219 5'
10730	23256	36272	1.99	0.0E+00	AB011117.1	NT	Homo sapiens mRNA for KIAA0545 protein, partial cds
10746	23270	36286	2.18	0.0E+00	BE792155.1	EST_HUMAN	601582046F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3936539 5'
10747	23271		78.35	0.0E+00	BF684061.1	EST_HUMAN	602141403F1 NIH_MGC_46 Homo sapiens cDNA clone IMAGE:4302432 5'
10749	23273	36288	4.66	0.0E+00	AU118386.1	EST_HUMAN	AU118386 HEMBA1 Homo sapiens cDNA clone HEMBA1003488 5'
10750	23274		8.15	0.0E+00	AW236289.1	EST_HUMAN	xn72b01.x1 NCL_CGAP_CML1 Homo sapiens cDNA clone IMAGE:1752772 3'
10755	23279	36292	7.25	0.0E+00	A1149809.1	EST_HUMAN	LACTATE DEHYDROGENASE M CHAIN (HUMAN);
10755	23279	36293	7.25	0.0E+00	A1149809.1	EST_HUMAN	qf43c03.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1752772 3'
10756	23280	36294	3.47	0.0E+00	AW391937.1	EST_HUMAN	QV4-ST0234-121189-032-b06 ST0234 Homo sapiens cDNA
10768	23292		1.54	0.0E+00	AU116908.1	EST_HUMAN	AU116908 HEMBA1 Homo sapiens cDNA clone HEMBA1000255 5'
10771	23295	36301	20.95	0.0E+00	11424728	NT	Homo sapiens insulin receptor (INSR), mRNA
10777	23301	36307	1.89	0.0E+00	AW804516.1	EST_HUMAN	QV0-UM0093-170400-191-d06 UM0093 Homo sapiens cDNA
10777	23301	36308	1.89	0.0E+00	AW804516.1	EST_HUMAN	QV0-UM0093-170400-191-d06 UM0093 Homo sapiens cDNA
10778	23302	36309	2.04	0.0E+00	BF340308.1	EST_HUMAN	602037014F1 NCL_CGAP_Bm64 Homo sapiens cDNA clone IMAGE:4184979 5'
10778	23303	36310	38.28	0.0E+00	BE261209.1	EST_HUMAN	601148357F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3163310 5'
10780	23313	36321	3.78	0.0E+00	U50326.1	NT	Human protein kinase C substrate 80K-H (PRKCSH) gene, exon 15-17
10784	23317	36326	3.48	0.0E+00	BE773036.1	EST_HUMAN	RC1-FT0134-170700-012-f07 FT0134 Homo sapiens cDNA
10784	23317	36327	3.48	0.0E+00	BE773036.1	EST_HUMAN	RC1-FT0134-170700-012-f07 FT0134 Homo sapiens cDNA
10816	23337	36350	55.63	0.0E+00	AA740782.1	EST_HUMAN	cb32e07.s1 NCL_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1325412 3' similar to contains element MSR1 repetitive element ;
10822	23343	36358	3.04	0.0E+00	AF252303.1	NT	Homo sapiens signaling lymphocytic activation molecule (SLAM) gene, exon 2

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Single Exon Probes Expressed in Fetal Liver

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
10835	23356	36371	1.92	0.0E+00	BE266478.1	EST_HUMAN	601192748F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3536867 5'
10835	23356	36372	1.92	0.0E+00	BE266478.1	EST_HUMAN	601192748F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3536867 5'
10838	23359	36374	6.99	0.0E+00	C05089.1	EST_HUMAN	C05089 Human heart cDNA (YNakamura) Homo sapiens cDNA clone 3NH4817
10845	23366	36382	2.16	0.0E+00	AA746375.1	EST_HUMAN	aa56h01.1 NCI CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1309009 5'
10845	23366	36383	2.16	0.0E+00	AA746375.1	EST_HUMAN	aa56h01.1 NCI CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1309009 5'
10856	23377	36395	8.08	0.0E+00	AL157608.1	EST_HUMAN	DKFZp761J2116_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761J2116 5'
10868	23389	36404	12.62	0.0E+00	AU116988.1	EST_HUMAN	AU116988 HEMBA1 Homo sapiens cDNA clone HEMBA1000424 5'
10881	23402	36419	2.07	0.0E+00	AV693656.1	EST_HUMAN	AV693656 HKC Homo sapiens cDNA clone GKCCNC03 5'
10913	23432	36453	3.17	0.0E+00	BE182390.1	EST_HUMAN	PMO-HT0845-060500-002-E05 HT0845 Homo sapiens cDNA
10913	23432	36454	3.17	0.0E+00	BE182390.1	EST_HUMAN	PMO-HT0845-060500-002-E05 HT0845 Homo sapiens cDNA
10914	23433		1.8	0.0E+00	AV701152.1	EST_HUMAN	AV701152 ADA Homo sapiens cDNA clone ADAAAD06 5'
10928	23446	36467	3.19	0.0E+00	BE896423.1	EST_HUMAN	601439092F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3924142 5'
10935	23452	36474	1.89	0.0E+00	AW500307.1	EST_HUMAN	UI-HF-BN0-akg-4-02-Q-UI.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3077019 5'
10935	23452	36475	1.69	0.0E+00	AW500307.1	EST_HUMAN	UI-HF-BN0-akg-4-02-Q-UI.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3077019 5'
							bb78c04.y1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3048486 5' similar to gb:Y00345_cds1 POLYADENYLATE-BINDING PROTEIN (HUMAN); gb:X65553 M.musculus mRNA for poly(A) binding protein (MOUSE);
10938	23455	36478	6.2	0.0E+00	BE018283.1	EST_HUMAN	601440446F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3925403 5'
10972	23487	36516	5.22	0.0E+00	BE897953.1	EST_HUMAN	601440446F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3925403 5'
10973	23488	36517	1.99	0.0E+00	AI459545.1	EST_HUMAN	ac88g11.x1 Schiller meningioma Homo sapiens cDNA clone IMAGE:1952804 3'
10973	23488	36518	1.99	0.0E+00	AI459545.1	EST_HUMAN	ac88g11.x1 Schiller meningioma Homo sapiens cDNA clone IMAGE:1952804 3'
10986	23500	36530	1.82	0.0E+00	AL042278.1	EST_HUMAN	DKFZp434L0120_r1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZp434L0120 5'
11018	23532	36568	3.57	0.0E+00	4758827	NT	Homo sapiens neurxin III (NRXN3) mRNA
11019	23533	36569	8.71	0.0E+00	BF206561.1	EST_HUMAN	601870902F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4101433 5'
11023	23537	36573	20.4	0.0E+00	AW207734.1	EST_HUMAN	UI-H-BI2-age-h-01-Q-UI.s1 NCJ CGAP_Sub4 Homo sapiens cDNA clone IMAGE:2724312 3'
11028	23542	36577	6.39	0.0E+00	AB018280.1	NT	Homo sapiens mRNA for KIAA0717 protein, partial cds
11028	23542	36578	6.39	0.0E+00	AB018280.1	NT	Homo sapiens mRNA for KIAA0717 protein, partial cds
11029	23543	36579	3.28	0.0E+00	BE206846.1	EST_HUMAN	55KDA-ASSOCIATED PROTEIN.;
11029	23543	36580	3.28	0.0E+00	BE206846.1	EST_HUMAN	55KDA-ASSOCIATED PROTEIN.;
11053	23566	36602	2.05	0.0E+00	BF093687.1	EST_HUMAN	QV0-UM0091-120900-385-b12 UM0091 Homo sapiens cDNA
11054	20011	32877	2.13	0.0E+00	L32832.1	NT	Homo sapiens zinc finger homeodomain protein (ATBF1-A) mRNA, complete cds
11057	23569	36604	3.38	0.0E+00	BE148076.1	EST_HUMAN	RC3-HT0230-040500-110-h04 HT0230 Homo sapiens cDNA
11057	23569	36605	3.38	0.0E+00	BE148076.1	EST_HUMAN	RC3-HT0230-040500-110-h04 HT0230 Homo sapiens cDNA

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Table 4  
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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11092	23604	36644	5.37	0.0E+00	BF507876.1	EST_HUMAN	U1H-B14-ack-b-10-Q-U1.s1 NC1_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3085028 3'
11092	23604	36645	5.37	0.0E+00	BF507876.1	EST_HUMAN	U1H-B14-ack-b-10-Q-U1.s1 NC1_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3085028 3'
11101	23611	36651	3.82	0.0E+00	AU135170.1	EST_HUMAN	AU135170 PLACE1 Homo sapiens cDNA clone PLACE1001381 5'
11105	23615	36655	1.61	0.0E+00	BF576138.1	EST_HUMAN	602132459F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4271630 5'
11105	23615	36656	1.61	0.0E+00	BF576138.1	EST_HUMAN	602132459F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4271630 5'
11106	23616	36657	8.62	0.0E+00	BE876401.1	EST_HUMAN	601486828F1 NIH_MGC_89 Homo sapiens cDNA clone IMAGE:3889207 5'
11106	23616	36658	8.62	0.0E+00	BE876401.1	EST_HUMAN	601486828F1 NIH_MGC_89 Homo sapiens cDNA clone IMAGE:3889207 5'
11113	23623	36664	1.85	0.0E+00	D87682.1	NT	Human mRNA for KIAA0241 gene, partial cds
11119	23628		5.3	0.0E+00	BF240536.1	EST_HUMAN	601875630F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4089710 5'
11132	23640	36680	3.05	0.0E+00	AB037737.1	NT	Homo sapiens mRNA for KIAA1316 protein, partial cds
11132	23640	36681	3.05	0.0E+00	AB037737.1	NT	Homo sapiens mRNA for KIAA1316 protein, partial cds
11137	23645	36685	3.57	0.0E+00	11430868	NT	Homo sapiens retinoblastoma-like 2 (p130) (RBL2), mRNA
11137	23645	36686	3.57	0.0E+00	11430868	NT	Homo sapiens retinoblastoma-like 2 (p130) (RBL2), mRNA
11154	23661	36708	9.12	0.0E+00	4503544	NT	Homo sapiens eukaryotic translation initiation factor 5A (EIF5A) mRNA
11162	23669	36714	1.68	0.0E+00	BF576267.1	EST_HUMAN	602134132F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4289502 5'
11165	23672	36718	6.44	0.0E+00	AW328173.1	EST_HUMAN	dr04g05.x1 NIH_MGC_3 Homo sapiens cDNA clone IMAGE:2847177 5'
11168	23675		46.81	0.0E+00	M55083.1	NT	Human gamma actin-like pseudogene, complete cds
11173	23680	36725	5.47	0.0E+00	BF306896.1	EST_HUMAN	601889823F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4123948 5'
11173	23680	36726	5.47	0.0E+00	BF306896.1	EST_HUMAN	601889823F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4123948 5'
11180	23686	36733	45.22	0.0E+00	BF362462.1	EST_HUMAN	QV2-NIN0054-230900-333-e04 NN0054 Homo sapiens cDNA
11201	23706	36757	1.99	0.0E+00	U36264.1	NT	Human beta-pitruine-adaptin (BAM22) gene, exon 18
11201	23706	36758	1.99	0.0E+00	U36264.1	NT	Human beta-pitruine-adaptin (BAM22) gene, exon 18
11205	23710		6.26	0.0E+00	BE897051.1	EST_HUMAN	601438603F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3924577 5'
11206	23711		1.61	0.0E+00	4503786	NT	Homo sapiens fyn-related kinase (FRK) mRNA
11217	23720	36774	2.82	0.0E+00	8923698	NT	Homo sapiens golgin-like protein (GLP), mRNA
11219	23722		2.56	0.0E+00	BF207862.1	EST_HUMAN	601861947F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:4081715 5'
11220	23723		7.59	0.0E+00	BE257744.1	EST_HUMAN	601116705F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3357384 5'
11233	23764	36820	5.51	0.0E+00	BE206846.1	EST_HUMAN	55KDA-ASSOCIATED PROTEIN. ;
11233	23764	36821	5.51	0.0E+00	BE206846.1	EST_HUMAN	ba04d07.y1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2823373 5' similar to TR:O76022 O76022 E1B-
11235	23766	36823	4.56	0.0E+00	AW753028.1	EST_HUMAN	55KDA-ASSOCIATED PROTEIN. ;
11240	23771		3.42	0.0E+00	AA558707.1	EST_HUMAN	QV0-CT0225-101289-071-f06 CT0225 Homo sapiens cDNA n142c08.s1 NC1_CGAP_P14 Homo sapiens cDNA clone IMAGE:1043342 similar to gb:M95178 ALPHA- ACTININ 1, CYTOSKELETAL ISOFORM (HUMAN);

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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11241	18112	30521	6.08	0.0E+00	AI934954.1	EST_HUMAN	wp0608.x1 NCL_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2484094 3'
11242	23772	36829	9.55	0.0E+00	AW327895.1	EST_HUMAN	dr02608.x1 NIH_MGC_3 Homo sapiens cDNA clone IMAGE:2846919 5'
11260	24801	36847	1.56	0.0E+00	AW292776.1	EST_HUMAN	UI-H-BW0-aj-d-07-Q-UJ.s1 NCL_CGAP_Sub66 Homo sapiens cDNA clone IMAGE:2729509 3'
11268	23004	36012	2.1	0.0E+00	4758827	NT	Homo sapiens neuritin III (NRXN3) mRNA
11274	23727	36781	1.59	0.0E+00	BE965909.2	EST_HUMAN	601659088R1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3895916 3'
11274	23727	36782	1.59	0.0E+00	BE965909.2	EST_HUMAN	601659088R1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3895916 3'
11275	23728	36783	4.55	0.0E+00	BE185656.1	EST_HUMAN	IL5-HT0731-020500-077-05 HT0731 Homo sapiens cDNA
11288	23740	36796	5.82	0.0E+00	AL046540.1	EST_HUMAN	DKFZp434G178_1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434G178 5'
11288	23740	36797	5.82	0.0E+00	AL046540.1	EST_HUMAN	DKFZp434G178_1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434G178 5'
11298	23750	36807	16.85	0.0E+00	AI923116.1	EST_HUMAN	wn83g03.x1 NCL_CGAP_U11 Homo sapiens cDNA clone IMAGE:2452468 3' similar to gb:S37431 LAMININ RECEPTOR (HUMAN);
11301	23794	36851	7	0.0E+00	AA760913.1	EST_HUMAN	nz11c07.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1287468 3' similar to TR:Q13686 Q13686 ALKB HOMOLOG PROTEIN.;
11301	23794	36852	7	0.0E+00	AA760913.1	EST_HUMAN	nz11c07.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1287468 3' similar to TR:Q13686 Q13686 ALKB HOMOLOG PROTEIN.;
11306	23799	36858	2.02	0.0E+00	BE910546.1	EST_HUMAN	601501090F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3295919 3' similar to TR:O00409 O00409 CHECKPOINT SUPPRESSOR 1.;
11314	23012	36021	7.16	0.0E+00	BE676347.1	EST_HUMAN	AV757420 BM Homo sapiens cDNA clone BMFAGH03 5'
11323	23021	36030	1.69	0.0E+00	AV757420.1	EST_HUMAN	AV757420 BM Homo sapiens cDNA clone BMFAGH03 5'
11352	23806	36865	3.55	0.0E+00	L39891.1	NT	Homo sapiens polycystic kidney disease-associated protein (PKD1) gene, complete cds
11352	23806	36866	3.55	0.0E+00	L39891.1	NT	Homo sapiens polycystic kidney disease-associated protein (PKD1) gene, complete cds
11366	23818	36879	4.02	0.0E+00	AU138211.1	EST_HUMAN	AU138211 PLACE1 Homo sapiens cDNA clone PLACE1008077 5'
11381	23833	36896	9.87	0.0E+00	BE622317.1	EST_HUMAN	601441096F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3916270 5'
11386	23838	36900	11.61	0.0E+00	AI207425.1	EST_HUMAN	HA2767 Human fetal liver cDNA library Homo sapiens cDNA
11386	23838	36901	11.61	0.0E+00	AI207425.1	EST_HUMAN	HA2767 Human fetal liver cDNA library Homo sapiens cDNA
11415	23866	36927	36.86	0.0E+00	BE748899.1	EST_HUMAN	601572186T1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:3839012 3'
11415	23866	36928	36.86	0.0E+00	BE748899.1	EST_HUMAN	601572186T1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:3839012 3'
11425	23876	36940	2.19	0.0E+00	AU141882.1	EST_HUMAN	601572186T1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:3839012 3'
11425	23876	36941	2.19	0.0E+00	AU141882.1	EST_HUMAN	AU141882 THYRO1 Homo sapiens cDNA clone THYRO1001398 5'
11428	23879	36944	2.52	0.0E+00	AW006022.1	EST_HUMAN	wz91h01.x1 NCL_CGAP_Bm25 Homo sapiens cDNA clone THYRO1001398 5'
11431	24802	36947	3.76	0.0E+00	BF002333.1	EST_HUMAN	CE11040 ZINC FINGER, C2H2 TYPE ;
11450	23900	36967	3.81	0.0E+00	AW387776.1	EST_HUMAN	7h22b10.x1 NCL_CGAP_Co16 Homo sapiens cDNA clone IMAGE:3316699 3' similar to TR:Q13458 Q13458 TRIO.;
11450	23900	36967	3.81	0.0E+00	AW387776.1	EST_HUMAN	MR4-ST0118-261099-012-b03 ST0118 Homo sapiens cDNA



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Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11450	23900	36988	3.81	0.0E+00	AW387776.1	EST_HUMAN	MR4-ST0118-261099-012-b03 ST0118 Homo sapiens cDNA
11459	23909		2.48	0.0E+00	AW863777.1	EST_HUMAN	MR3-SN0010-310300-107-h03 SN0010 Homo sapiens cDNA
11471	23921	36990	3.38	0.0E+00	11435244	NT	Homo sapiens KIAA0247 gene product (KIAA0247), mRNA
11471	23921	36991	3.38	0.0E+00	11435244	NT	Homo sapiens KIAA0247 gene product (KIAA0247), mRNA
11476	23926	36997	7.44	0.0E+00	U36253.1	NT	Human beta-prime-adaptin (BAM22) gene, exon 5
11479	23929	36999	12.8	0.0E+00	BE379254.1	EST_HUMAN	601237691F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3609823 5'
11479	23929	37000	12.8	0.0E+00	BE379254.1	EST_HUMAN	601237691F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3609823 5'
11492	23941	37012	2.5	0.0E+00	BE794758.1	EST_HUMAN	601580588F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3944708 5'
11493	23942	37013	115.56	0.0E+00	BE878633.1	EST_HUMAN	601491821F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3894220 5'
11507	23956	37026	18.86	0.0E+00	BE409993.1	EST_HUMAN	601299403F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3629544 5'
11508	23957	37027	1.84	0.0E+00	BE148650.1	EST_HUMAN	MR0-HT0241-150500-011-f02 HT0241 Homo sapiens cDNA
11509	23958	37028	3.08	0.0E+00	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
11509	23958	37029	3.08	0.0E+00	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
11510	18292	30771	1.77	0.0E+00	D26535.1	NT	Human gene for dihydropyrimidine succinyltransferase, complete cds (exon 1-15)
11510	18292	30772	1.77	0.0E+00	D26535.1	NT	Human gene for dihydropyrimidine succinyltransferase, complete cds (exon 1-15)
11518	23866	37038	2.03	0.0E+00	AU132940.1	EST_HUMAN	AU132940 NT2RP4 Homo sapiens cDNA clone NT2RP4000929 5'
11521	23868	37040	4.44	0.0E+00	BE903372.1	EST_HUMAN	601676357F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3958935 5'
11533	23881	37051	1.84	0.0E+00	BF312552.1	EST_HUMAN	601897524F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4127069 5'
11533	23881	37052	1.84	0.0E+00	BF312552.1	EST_HUMAN	601897524F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4127069 5'
11535	23883	37054	3.01	0.0E+00	X51755.1	NT	Human lambda-immunoglobulin constant region complex (germline)
11535	23883	37055	3.01	0.0E+00	X51755.1	NT	Human lambda-immunoglobulin constant region complex (germline)
11544	23992		4.03	0.0E+00	BE906402.1	EST_HUMAN	601488553F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3900398 5'
11560	24007	37078	1.74	0.0E+00	9635487	NT	Human endogenous retrovirus, complete genome
11574	24803		23.39	0.0E+00	BF309120.1	EST_HUMAN	601880534F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4131418 5'
11580	24026	37094	55.98	0.0E+00	BF309175.1	EST_HUMAN	601177407F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3532868 5'
11589	24032	37102	7.09	0.0E+00	AL040793.1	EST_HUMAN	DKFZ434D0415 t1 434 (synonym: hies3) Homo sapiens cDNA clone DKFZ434D0415 5'
11652	25091	30499	6.23	0.0E+00	BE312542.1	EST_HUMAN	601150023F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3503020 5'
11666	24925		1.78	0.0E+00	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
11668	24836		8.17	0.0E+00	AI180993.1	EST_HUMAN	qel7b12.x1 Soares_fetal_lung_NbH1.19W Homo sapiens cDNA clone IMAGE:1739231 3'
11679	24097		3.67	0.0E+00	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
11699	24112		4.16	0.0E+00	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
11701	24114		1.35	0.0E+00	AB016195.1	NT	Homo sapiens ELK1 pseudogene (ELK2) and immunoglobulin heavy chain gamma pseudogene (IGHGP)
11709	24120		3.59	0.0E+00	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIA0330), mRNA
11728	24134		5.98	0.0E+00	5802973	NT	Homo sapiens antioxidant protein 1 (AOP1), nuclear gene encoding mitochondrial protein, mRNA
11763	24897	30711	1.49	0.0E+00	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
11774	24908		4.78	0.0E+00	AL041931.1	EST_HUMAN	DKFZp434K0819_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434K0819 5'
11803	25058		4.28	0.0E+00	11418318	NT	Homo sapiens G-2 and S-phase expressed 1 (GISE1), mRNA
11812	24184		11.28	0.0E+00	AL046544.1	EST_HUMAN	DKFZp434G218_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434G218 5'
11824	24941		2.62	0.0E+00	AI903497.1	EST_HUMAN	IL-BT030-271098-001 BT030 Homo sapiens cDNA
11862	25079		2.35	0.0E+00	N54484.1	EST_HUMAN	y40e08.s1 Soares fetal liver spleen 1NfLS Homo sapiens cDNA clone IMAGE:245222 3' similar to SW:POL_BAEVM P10272 POL POLYPROTEIN
11877	24227		4.72	0.0E+00	AF106856.1	NT	Homo sapiens adenylosuccinate lyase gene, complete cds
11880	13490	26007	5.46	0.0E+00	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
11880	13490	26008	5.46	0.0E+00	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
11889	24845		2.48	0.0E+00	10092587	NT	Homo sapiens nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2 (NFATC2), mRNA
11917	13204		3.24	0.0E+00	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
11955	24720	30870	4.32	0.0E+00	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
12017	24871	30708	24.36	0.0E+00	AW590082.1	EST_HUMAN	hg31e06.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2947234 3' similar to contains Alu repetitive element; contains element MER22 repetitive element
12028	24926		1.5	0.0E+00	BE090210.1	EST_HUMAN	RC6-BT0711-290300-011-D05 BT0711 Homo sapiens cDNA
12073	24938		2	0.0E+00	AF088757.1	NT	Homo sapiens somatostatin receptor subtype 3 (SSTR3) gene, 5' flanking region and partial cds
12112	24373		4.16	0.0E+00	9635487	NT	Human endogenous retrovirus, complete genome
12155	24931		1.93	0.0E+00	AI204914.1	EST_HUMAN	an05h04.x1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:1684759 3'
12199	24927		1.52	0.0E+00	BE439792.1	EST_HUMAN	HTM1-654F HTMT Homo sapiens cDNA
12244	14314	26855	4.92	0.0E+00	H30132.1	EST_HUMAN	y059e08.r1 Soares breast 3NbHst Homo sapiens cDNA clone IMAGE:182246 5' similar to gb:M64099 GAMMA-GLUTAMYL TRANSPEPTIDASE 5 PRECURSOR (HUMAN);
12244	14314	26856	4.92	0.0E+00	H30132.1	EST_HUMAN	y059e08.r1 Soares breast 3NbHst Homo sapiens cDNA clone IMAGE:182246 5' similar to gb:M64099 GAMMA-GLUTAMYL TRANSPEPTIDASE 5 PRECURSOR (HUMAN);
12256	24466		33.19	0.0E+00	D50859.1	NT	Human gamma-cytoplasmic actin (ACTGP9) pseudogene
12259	24469	30928	3.51	0.0E+00	11418189	NT	Homo sapiens thyroid autoantigen 70kD (Ku antigen) (G22P1), mRNA
12259	24469	30929	3.51	0.0E+00	11418189	NT	Homo sapiens thyroid autoantigen 70kD (Ku antigen) (G22P1), mRNA

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
12279	14717	27289	1.42	0.0E+00	4758489	NT	Homo sapiens GTP binding protein 1 (GTPBP1) mRNA
12318	24508		1.91	0.0E+00	AW684999.1	EST HUMAN	h88a08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2879154 3'
12401	15963	28440	5.09	0.0E+00	4885312	NT	Homo sapiens G protein-coupled receptor 24 (GPR24), mRNA
12409	19031	30492	2.98	0.0E+00	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
12412	24568		2.55	0.0E+00	AB029900.1	NT	Homo sapiens CST gene for cerebroside sulfotransferase, exon 1, 2, 3, 4, 5
12453	24587	30517	1.87	0.0E+00	9558724	NT	Homo sapiens cleavage and polyadenylation specific factor 1, 180kD subunit (CPSF1), mRNA
12481	25102		2.92	0.0E+00	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
12488	13277	25754	2.02	0.0E+00	6806918	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
12573	24670	30876	1.55	0.0E+00	11417882	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
12576	24672		2.54	0.0E+00	AB002059.1	NT	Homo sapiens DNA for Human P2XM, complete cds
12580	24676		4.31	0.0E+00	7657020	NT	Homo sapiens DKFZp434P211 protein (DKFZP434P211), mRNA
12600	24686		2.35	0.0E+00	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)

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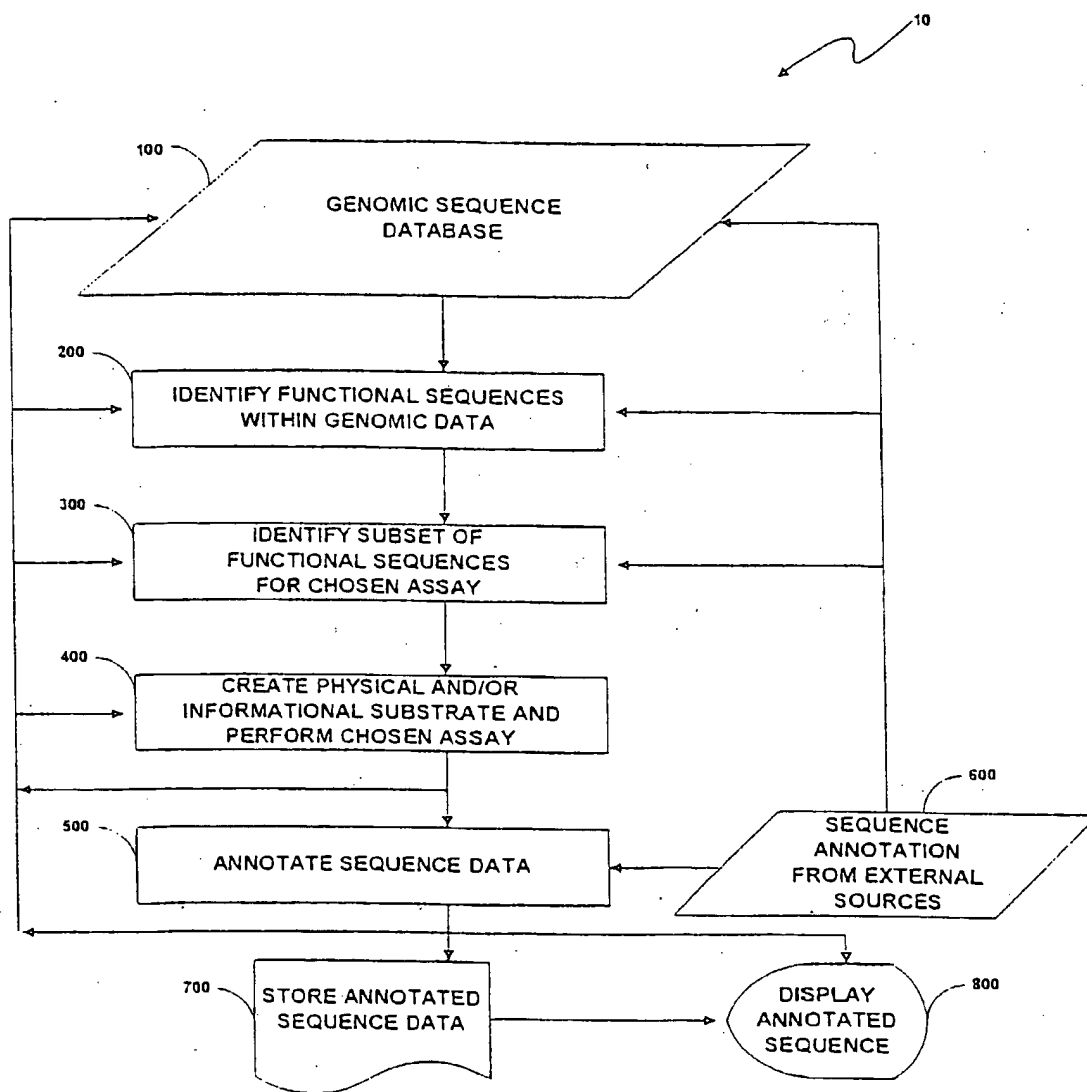


Fig. 1

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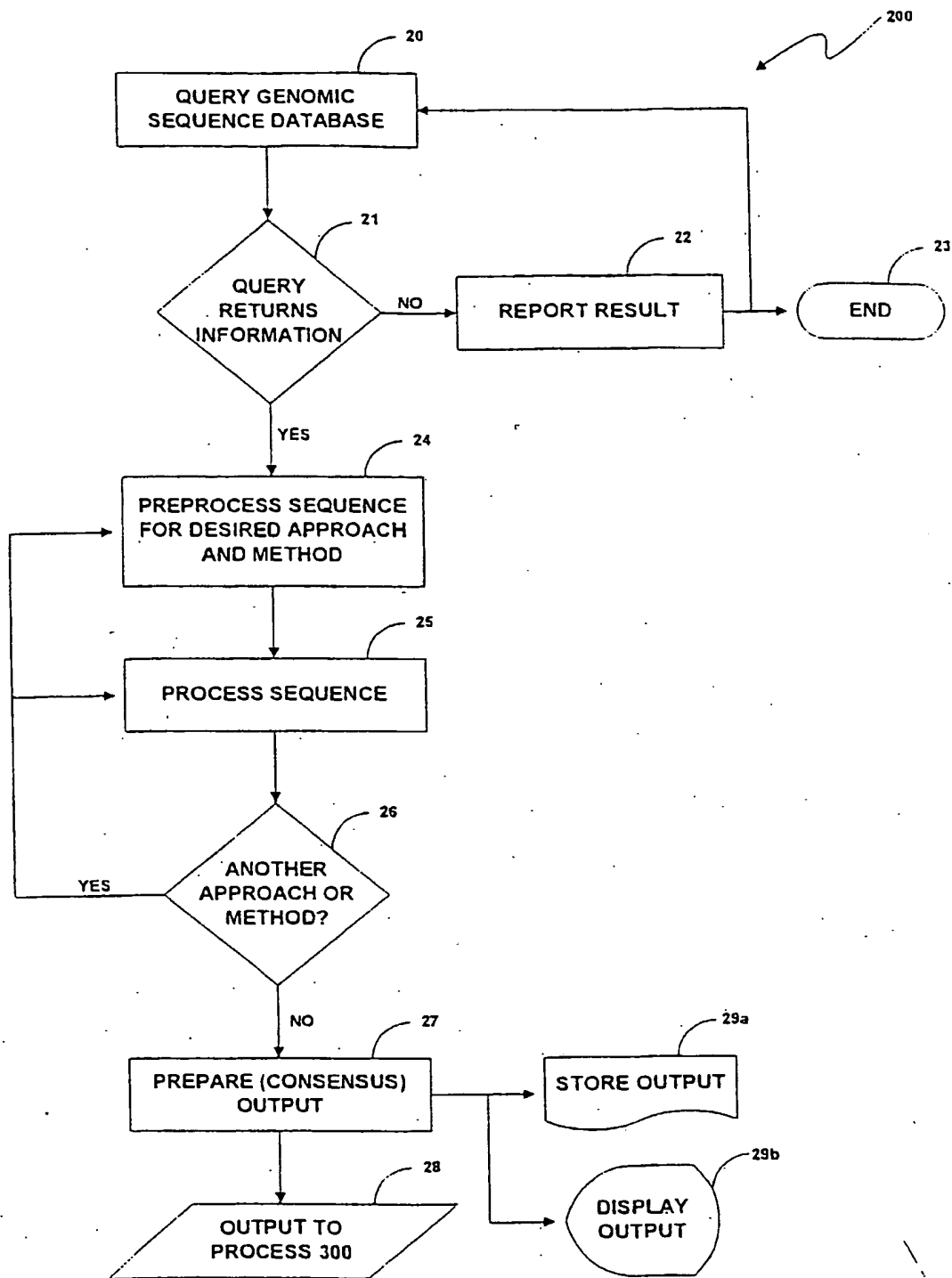


Fig. 2

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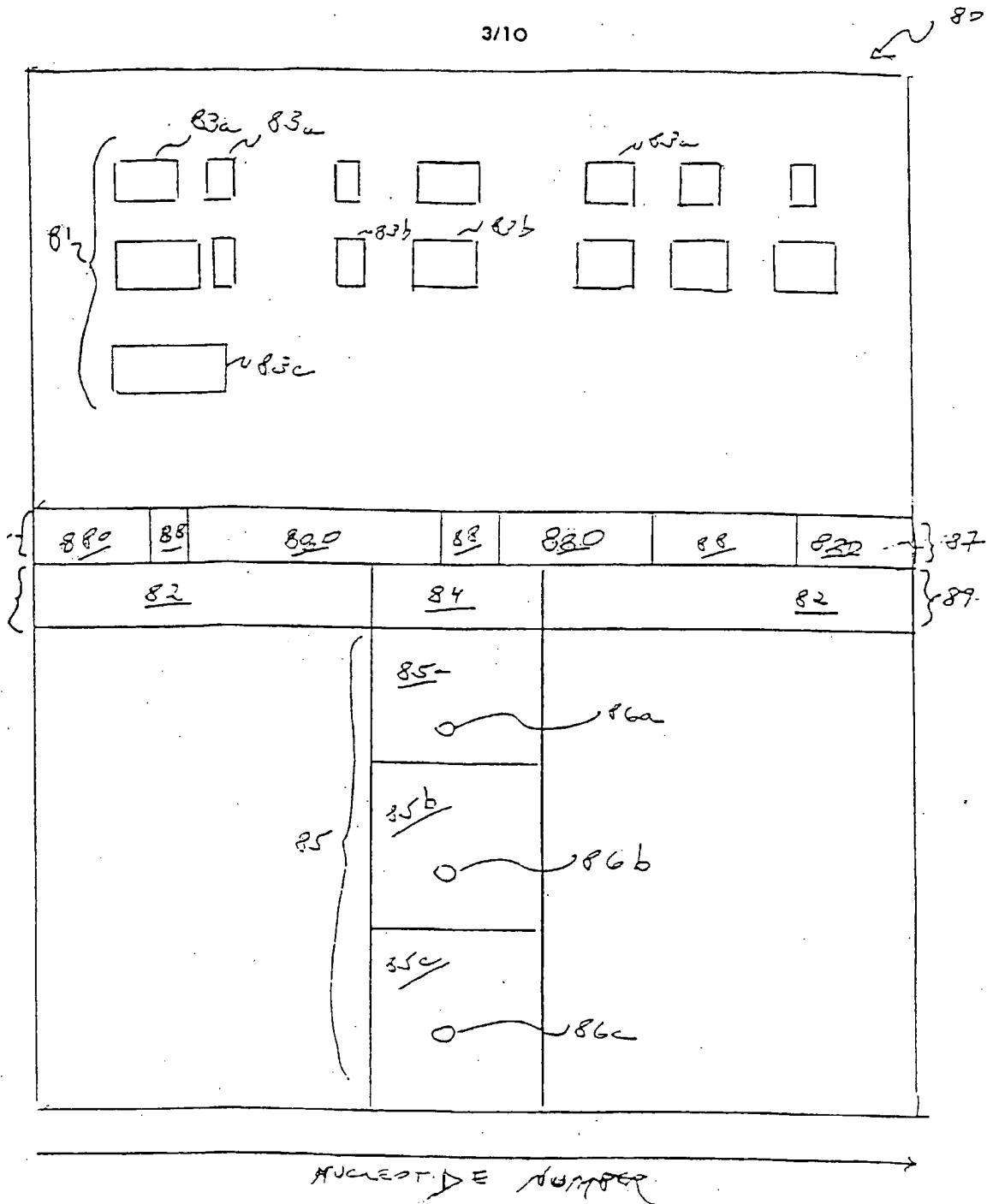


Fig. 3

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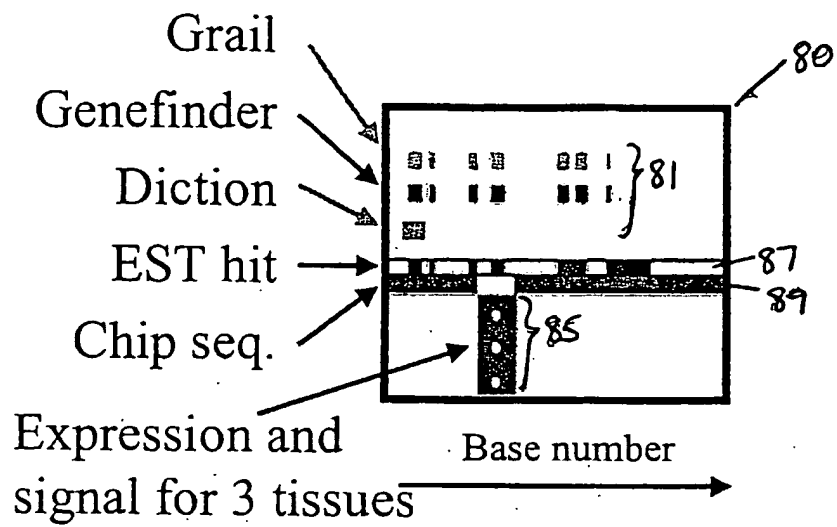


Fig. 4

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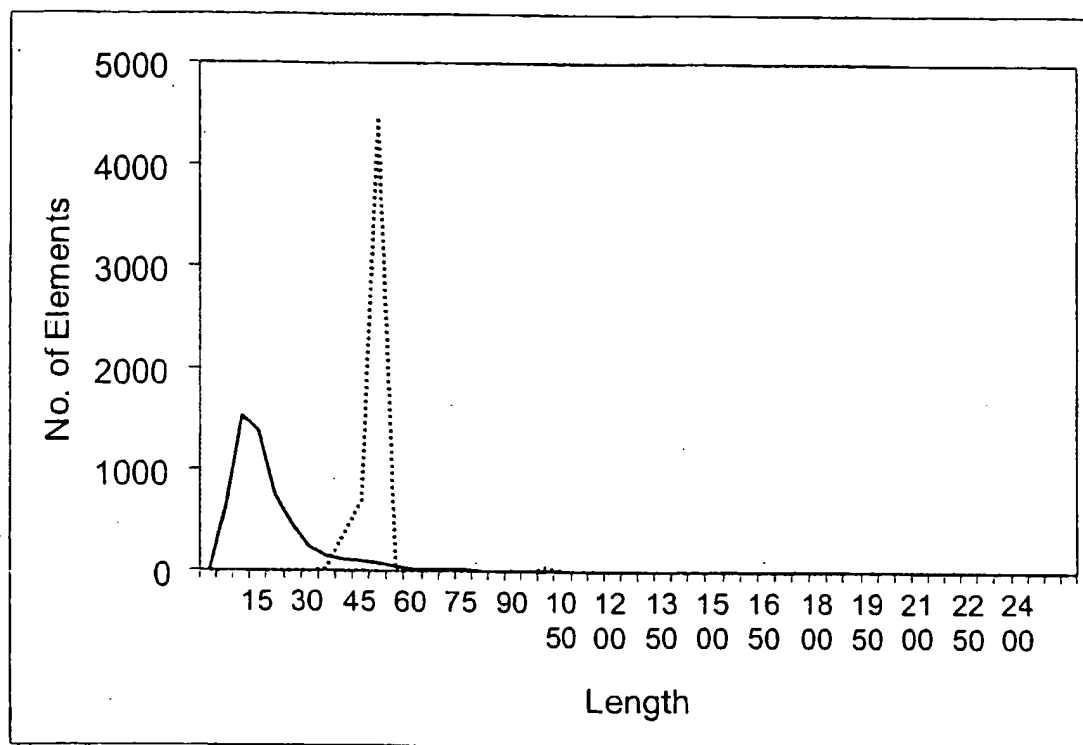


Fig. 5



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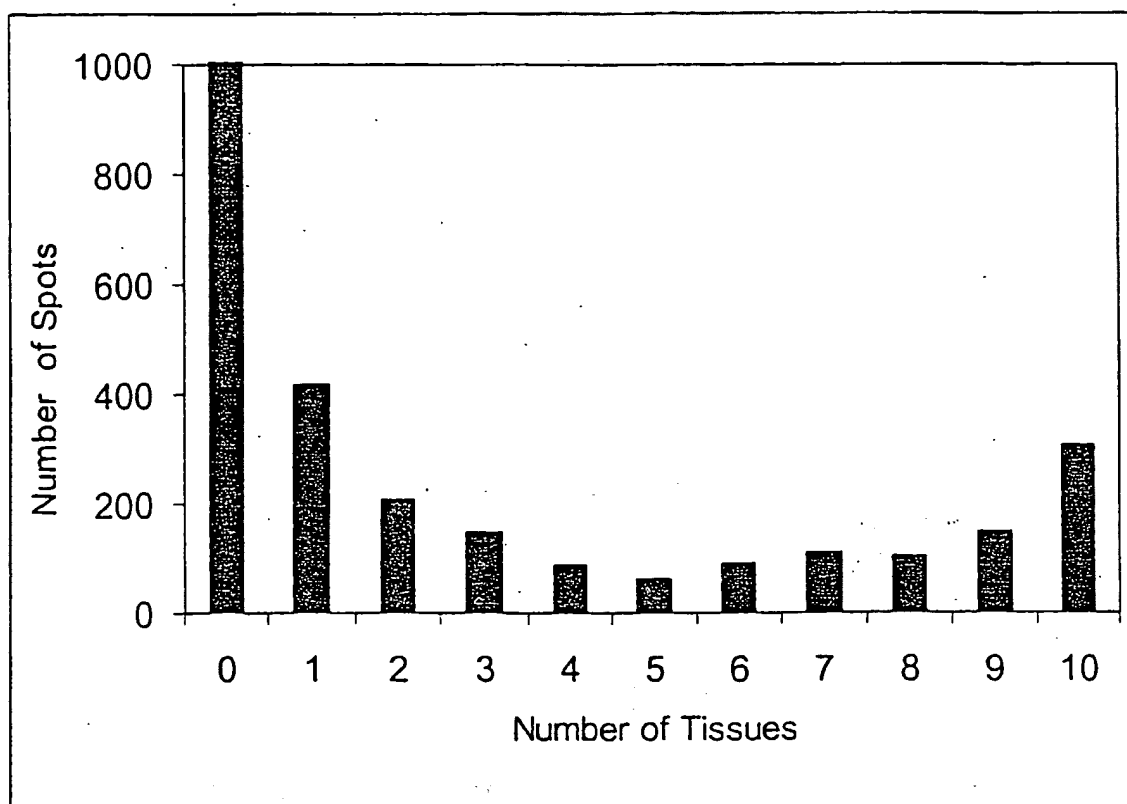
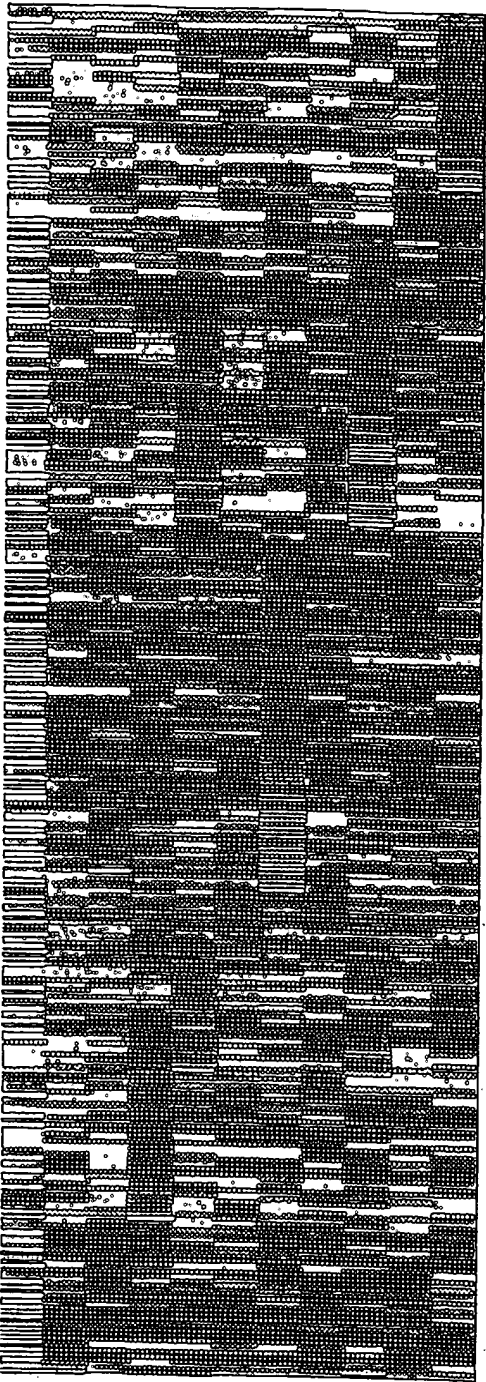


Fig. 6



EST Hit  
Bone Marrow  
Brain  
BT474  
Fetal Liver  
HBL100  
Heart  
Hela  
Liver  
Lung  
Placenta

Fig. 7a

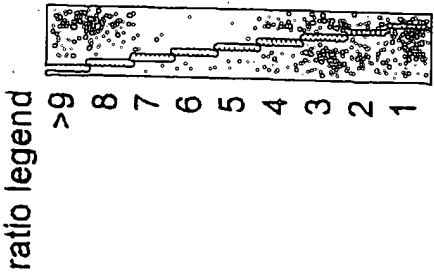


Fig. 7b

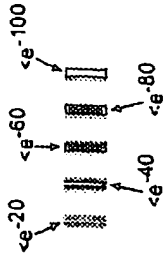


Fig. 7c

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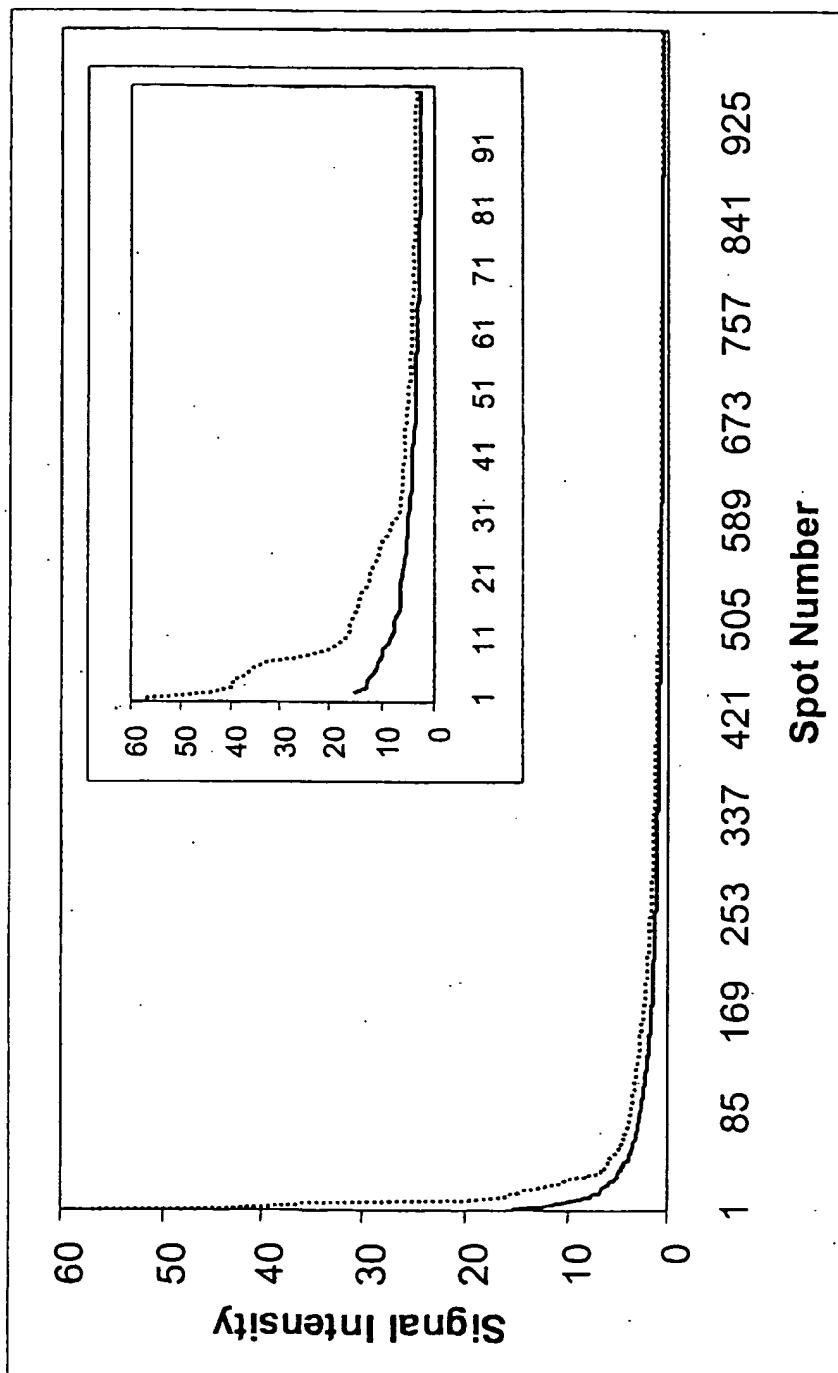


Fig. 8

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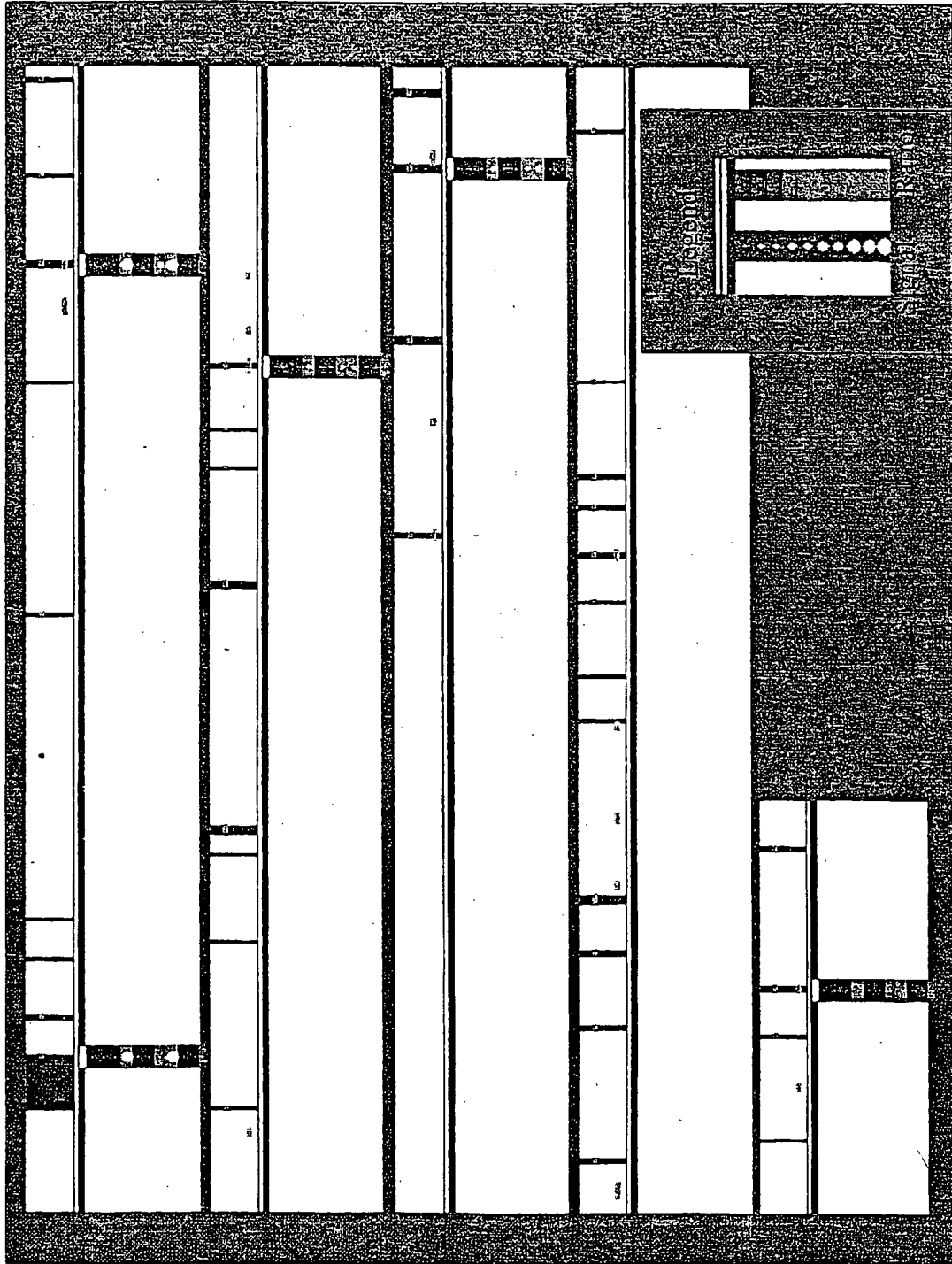


Fig. 9

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Fig. 10

